SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

THIAGARAJAR COLLEGE OF ENGINEERING

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI - 625015, TAMIL NADU
625015
www.tce.edu

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Thiagarajar College of Engineering (TCE), Madurai Tamil Nadu is one of the three Govt. aided Colleges in Tamil Nadu. Established in 1957, by philanthropist and industrialist Thiru. Shri. Karumuttu Thiagarajan Chettiar, TCE has grown as one of the top 5 Engineering colleges in Tamil Nadu with 8 undergraduate and 14 post graduate programmes by 12 departments. The College has over 4000 students and 273 faculty members. The College is partially financed by Government while the Trust takes care of majority of its expenses. The College has state of art facilities in most of the Departments and has a strong research focus with 334 part-time research scholars working in research laboratories and Centres under various Departments. Thiagarajar College of Engineering is one of the few colleges in Tamil Nadu, selected by Ministry of Human Resource Development Govt. of India and World Bank to provide assistance through Technical Education Quality Improvement Program (TEQIP) under TEQIP Phase II and TEQIP phase III.

One of the novel initiatives in respect of Industry-Institute Interaction is the establishment of   in Mechanical Electrical Engineering undergraduate Programme curriculum, which have been co-created by subject matter experts from TVS Motors and TCE. Thiagarajar Advanced Research Centre in the campus houses the TIFAC Centre of Relevance and excellence in   Wireless Technologies established with generous support from government, management   and industries.

The College has a Technology Business Incubation unit supported by the Govt. of India. The College has incubated a company "Thiagarajar Telekom Solutions Limited" in the area of   RF Systems and antennas. Department of Electrical and Electronics Engineering and   Department of Electronics and Communication Engineering have won the "Best Industry Linked Technical Institutions" award instituted by the All India Council for Technical Education (AICTE) and Confederation of Indian Industries (CII) for the year 2014 and 2016. The College has positioned 39th Rank in the National Institutional Ranking Framework(NIRF-2018) instituted by MHRD, Govt. of India.

Vision

Vision Statement:

World class quality technical education with strong ethical values

Mission

Mission Statement:

We at TCE shall strive continuously,

• Academic excellence in Science, Engineering and Technology through dedication to duty, commitment to research, innovation in learning and faith in human values

• **Enable the students to develop into outstanding professionals with high ethical standards capable of creating, developing and managing global engineering enterprises**

• **Fulfill expectations of the society and industry by equipping students with state of art technology resources for developing sustainable solutions**

• **Achieve these through team efforts making Thiagarajar College of Engineering the socially diligent trend setter in technical education**

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- 61 years old institute with philanthropic management
- Qualified and experienced faculty
- Meritorious Students
- Academic Process - Outcome Based Education with Choice Based Credit System for UG/PG programmes
- Research oriented Special Interest Groups in Departments
- Sponsored Research – Collaborative projects with DRDO
- Active MoUs with Industries - TVS Motors, Honeywell
- Publication in refereed and high impact factor Journals with citations
- TARC and TIFAC -CORE
- Students Placements – Consistent and good placement record (90%) for over 16 years
- Technology Based Social Work

Institutional Weakness

- Interdisciplinary Curriculum is being evolved now
- Interdisciplinary research among few Departments only
- Promotion of innovative student projects for the past few years
- Inadequate PG student assistantships
- Lack of Faculty Internship
- Inadequate Faculty Exchange Programmes
- Laboratories have not been accredited (NABL)

Institutional Opportunity

- Linking Curriculum with International MOOC courses
- New Multi disciplinary courses
- Application oriented Learning - EPICS
- Collaborative research with industries and R&D organizations
- Consultancy and testing work with local industries
- Promoting Student internship
- Accreditation for Laboratories

- Exchange Programmes with National and International Universities
- Interface with domain companies for placement and internship
- Promoting entrepreneurship

Institutional Challenge

- Technology obsolescence
- Possible arrival of foreign universities
- Limitation in increasing the fee due to social constraints
- Sustaining the quality research
- Faculty migration

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Academic process at TCE encompasses curriculum development, content delivery and assessment. From competency based curriculum, TCE has moved to Outcome Based Education (OBE) with Choice Based Credit System (CBCS). TCE offers 8 UG programmes, 14 PG programmes and Doctoral programmes in the field of Engineering & Technology, Science and Architecture.

TCE's major objective is to plan and implement a programme of education in engineering and allied sciences. Additionally, TCE aims to promote research, disseminate knowledge, foster cooperation and exchange of ideas between academic community and industrial organizations, and to develop entrepreneurship skills among the students. TCE also strives to achieve academic excellence along with a harmonious development of the personality of students.

Teaching-learning and Evaluation

The academic process of teaching and learning is ensured by the academic calendar. The academic processes are reflected in the continuous schemes and terminal evaluation methodologies. Each semester normally consists of 90 working days. In any contingent situation, the number of working days per semester will not be less than 65 days. Teaching and the commitment of the students to learn are taken extremely serious but there is often a healthy relationship exist between the teacher and students. Though the class attendance is mandatory for the students, they are given enough opportunities to work independently and develop an in-depth knowledge of their subject, critical and analytical thinking through active participation in Special Interest Group (SIG) activities.

The key requirements of these processes include classroom ambience, faculty training, library, laboratory infrastructure, student development activities and support systems. The project works of the students are evaluated by a team comprising of Guide, Head of the Department and an external examiner. The external examiner from higher learning institution/industry is appointed by the Controller of Examinations of the College from the panel of the examiners suggested by the Head of the Department. The College has better Laboratory infrastructure to provide hands-on experience to some courses, certification courses and practical courses. The College has main library with adequate books/journals, online access for eResources through

internet and mobile application.

The Heads of each Department attaches about 20-25 students to a faculty who shall function as Tutor for those students throughout their period of study. Class committee meetings are scheduled and conducted by the chair person for each class; feedback from student representatives is documented and actions are taken.

Controller of Examinations office team publishes declares the result as per scheduled time. The question papers and the evaluated answer scripted are audited by the external audit team

Research, Innovations and Extension

Research:

TCE is focussed on Research & Development in Engineering, Technology and Sciences. The various programs are nurtured through academic and sponsored research funded by National organizations and industry. The research culture is brought in among faculty and students through SIG and Department association activities. This leads to academic, sponsored and industry allied research in all departments which in turn results in journal publications, lab establishments, patents filing,

Innovations:

SIG of each department identifies the industry related to their activities. This enables the introduction of new one credit courses and internships during 8th semester to students. Further, alumni working in various industries engage students by interacting with them through mentoring program, motivational talks and seminars.

Extension Activities:

The key communities identified by the College include the neighbouring villages and urban slums in Madurai. The communities are identified by exploratory visits by few concerned faculty members and students recognized by the College. The identified communities are formally visited by the National Service Scheme (NSS) co-coordinators and students. During their subsequent visits, they interact with the Panchayat leaders and elders of those communities to identify their needs. The needs of the community are translated into technology based works. So far, the NSS team has worked in villages namely Villachery, Thonukal and Sambakulam for a period of three years in areas like GIS, Energy auditing, Water management, Mason training, sanitation and computer literacy. The documentation done has been submitted to the Panchayat leaders and in few cases has been implemented successfully. The administration supports financially and administratively for all these technology based social works.Consultancy – It provides faculty and students to undertake assignments from the industry which includes survey reports, project development, testing and validation.

Infrastructure and Learning Resources

All classrooms are equipped with ICT enabled teaching learning process. Some laboratories are set up with the industry support, as a result of MoUs signed between the College and the industry. The campus has set up surveillance camera facility to ensure safety and security to all.

Library provide online journal access, eResources to students, faculty and research scholars to carry out their academic projects, SIG activities, research work, sponsored and consultancy projects.

Data center was established in TCE to consolidate all the App servers, DB servers and computer clusters into a single facility to ease the maintenance and provisioning of servers and Apps to users throughout the campus. It offers internet facility throughout the campus with the help of BSNL and NKN. The Data center is equipped with 24x7 cooling system, smoke detectors, fire extinguishers, surveillance camera, and door access control.

Student Support and Progression

Students are engaged in:

- *Co-curricular Activities*

The students are involved in organizing the technical events to share the information on a focussed theme for students of other Colleges. In the process, the students are practically trained in managerial skills and competencies. Apart from these, technical competitions and project contests are conducted through professional society student chapters like ACM, IEEE, ISTE, IE for the benefit of junior students by the senior students. Students are selected as ambassadors for Google, Microsoft and CTS and have won many prizes in technical contests like Ultratech Technical Quiz, IEEE Xtreme Programming Contest.

Placement trainings like soft skill training by Corporate/Training sources, aptitude training, placement training by senior students and alumni and training by faculty on domain areas to students.

- *Special Interest Group (SIG) activities*

Asynchronous learning takes place among the students in the SIG. The research scholars and PG students usually guide the second, third and final year UG students in the respective domain to acquire the knowledge in that area. This facilitates the students to get involved in the sponsored research projects which are being carried out by the faculty members. These processes enables the students get engaged in learning beyond curriculum. For example, Thiaragarajar Advanced Research Center (TARC) was established with the high end technological laboratories. These laboratories are facilitating the academic and sponsored research being carried out by the faculty members and potential UG/PG students. Innovation Clubs are initiated by the students with an objective to participate in the national/international contests now and then. SIG activities also enable students to participate in paper presentation events in conferences and in journals

Governance, Leadership and Management

In order to implement the vision on quality education, the College has established a Quality Management System in the year 2004 for its teaching and learning, research and development, industry interaction and student activities. The Quality policy of the College states that "The College is committed to create quality Professionals to meet the emerging industrial and social needs through

- Innovative Teaching
- Applied Research
- Industry Interaction

- Faith in human values
- Aiming at continual improvement in all activities

All UG/PG programmes undergo NBA accreditation process as part of statutory requirement and to sustain quality of education. The College has obtained ISO 9001:2008 Certification for its various processes. Strategic planning is done on a short/long term basis which highlights the plan for infrastructure, resources, differentiator from competitors, new courses and business prospects. The strategic objectives, related to focus area, are mapped to ISO processes. Measurement system is identified for each ISO process. Metrics, targets and frequency are fixed for each process area. Staff/student attendance, mark entries of tests, examination process, feedbacks and operational maintenance are some of the metrics for regulating processes. The strategy is evolved for preparing overall financial plan and budget of the College with the inputs from each department. Budget and financial measurements and tracked by senior management team periodically.

The ethical value system envisioned by the Founder of the College is reflected in the process of distributing management seats to meritorious and economically deserving candidates without collecting any capitation fee. The economically weak students with good academic records are provided with annual scholarship by the Management and Alumni. Value systems being practiced in the College and Hostels such as continuance of *only vegetarian food* in the hostel for the past 5 decades are appreciated by the parents and Alumni.

Institutional Values and Best Practices

- TCE – TVS Model being adopted for EEE department, learnt from Mechanical department. Now, an interdisciplinary lab establishment in the area of Electric vehicles has been initiated.
- SIG activities promoted to all departments, which is evolved from ECE department
- Number of students for internship programs at higher learning institutions from all departments has been increased due to the benefits acquired from the programs like industry supported one credit courses across departments
- Increase in the number of inter-disciplinary projects between science and engineering departments, originated from Civil and Chemistry departments in investigating the use of plastic bitumen in laying roads (Patented).
- Technology based social activities encouraged among students of all departments, with the success stories from Civil Department
- Distribution of first year syllabus in the form of CDs to all affiliated Engineering colleges

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	THIAGARAJAR COLLEGE OF ENGINEERING
Address	Thiagarajar College of Engineering Madurai - 625015, Tamil Nadu
City	Madurai
State	Tamil Nadu
Pin	625015
Website	www.tce.edu

Contacts for Communication					
Designation	**Name**	**Telephone with STD Code**	**Mobile**	**Fax**	**Email**
Principal	V Abhaikumar	0452-2482430	9894094155	0452-2483427	principal@tce.edu
IQAC Coordinator	M. Palaninath aRaja	0452-2482240	9486461955	0452-2482241	deanpad@tce.edu

Status of the Institution	
Institution Status	Government and Grant-in-aid

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minroity institution	No

Establishment Details	
Date of Establishment, Prior to the Grant of 'Autonomy'	01-06-1957

Date of grant of 'Autonomy' to the College by UGC	01-06-1987

University to which the college is affiliated

State	University name	Document
Tamil Nadu	Anna University	[View Document](#)

Details of UGC recognition

Under Section	Date	View Document
2f of UGC	01-06-1994	[View Document](#)
12B of UGC	01-06-1994	[View Document](#)

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

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	[View Document](#)	04-04-2018	12	
COA	[View Document](#)	12-06-2018	12	

Recognitions

Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	Technology Information Forecasting and Assessment Council TIFAC Department of Science and Technology NewDelhi
Date of recognition	03-10-2001

Location and Area of Campus				
Campus Type	**Address**	**Location***	**Campus Area in Acres**	**Built up Area in sq.mts.**
Main campus area	Thiagarajar College of Engineering Madurai - 625015, Tamil Nadu	Semi-urban	136.24	79838.88

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	**Name of Programme/Course**	**Duration in Months**	**Entry Qualification**	**Medium of Instruction**	**Sanctioned Strength**	**No.of Students Admitted**
UG	BE,Civil Engineering	48	HSC	English	121	121
UG	BE,Mechanical Engineering	48	HSC	English	120	117
UG	BE,Electrical And Electronics Engineering	48	HSC	English	121	121
UG	BE,Electronics And Communication Engineering	48	HSC	English	120	116
UG	BE,Computer Science And Engineering	48	HSC	English	120	117
UG	BTech,Information Technology	48	HSC	English	120	120
UG	BE,Mechatronics	48	HSC	English	60	59
UG	BArch,Architecture	60	HSC	English	80	80
PG	ME,Civil Engineering	24	UG	English	18	16
PG	ME,Civil Engineering	24	UG	English	18	17
PG	ME,Civil Engineering	24	UG	English	25	22
PG	ME,Mechanical Engineering	24	UG	English	18	9
PG	ME,Mechani	24	UG	English	25	9

	cal Engineering					
PG	ME,Electrical And Electronics Engineering	24	UG	English	18	10
PG	ME,Electrical And Electronics Engineering	24	UG	English	25	21
PG	ME,Electronics And Communication Engineering	24	UG	English	18	11
PG	ME,Electronics And Communication Engineering	24	UG	English	25	21
PG	ME,Computer Science And Engineering	24	UG	English	25	18
PG	ME,Information Technology	24	UG	English	18	9
PG	ME,Mechatronics	24	UG	English	18	5
PG	MArch,Architecture	24	UG	English	20	0
PG	MCA,Computer Applications	36	UG	English	60	53
Doctoral (Ph.D)	PhD or DPhil,Civil Engineering	24	ME	English	7	7
Doctoral (Ph.D)	PhD or DPhil,Mechanical Engineering	24	ME	English	6	6
Doctoral (Ph.D)	PhD or DPhil,Electrical	24	ME	English	7	7

	And Electronics Engineering					
Doctoral (Ph.D)	PhD or DPhil,Electronics And Communication Engineering	24	ME	English	8	8
Doctoral (Ph.D)	PhD or DPhil,Computer Science And Engineering	24	ME	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Information Technology	24	ME	English	5	5
Doctoral (Ph.D)	PhD or DPhil,Mechatronics	24	ME	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Architecture	24	MArch	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Computer Applications	24	PG	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Physics	24	M.Phil	English	1	1
Doctoral (Ph.D)	PhD or DPhil,Chemistry	24	M.Phil	English	1	0
Doctoral (Ph.D)	PhD or DPhil,Mathematics And English	24	M.Phil	English	3	3

Position Details of Faculty & Staff in the College

Teaching Faculty											
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				13				17				73
Recruited	6	2	0	8	10	3	0	13	46	19	0	65
Yet to Recruit				5				4				8
Sanctioned by the Management/Society or Other Authorized Bodies				11				33				143
Recruited	5	6	0	11	15	18	0	33	85	58	0	143
Yet to Recruit				0				0				0

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				66
Recruited	13	6	0	19
Yet to Recruit				47
Sanctioned by the Management/Society or Other Authorized Bodies				79
Recruited	55	24	0	79
Yet to Recruit				0

Technical Staff				
	Male	**Female**	**Others**	**Total**
Sanctioned by the UGC /University State Government				108
Recruited	55	4	0	59
Yet to Recruit				49
Sanctioned by the Management/Society or Other Authorized Bodies				64
Recruited	59	5	0	64
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	14	10	0	29	22	0	56	25	0	156
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	10	4	0	58	45	0	117

Temporary Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty engaged with the college?	**Male**	**Female**	**Others**	**Total**
	10	0	0	10

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
Doctoral (Ph.D)	Male	21	0	0	0	21
	Female	24	0	0	0	24
	Others	0	0	0	0	0
UG	Male	479	9	0	0	488
	Female	362	1	0	0	363
	Others	0	0	0	0	0
PG	Male	99	0	0	0	99
	Female	135	0	0	0	135
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Programme		**Year 1**	**Year 2**	**Year 3**	**Year 4**
SC	Male	98	92	89	86
	Female	80	80	70	55
	Others	0	0	0	0
ST	Male	6	11	5	3
	Female	1	0	2	2
	Others	0	0	0	0
OBC	Male	567	564	547	557
	Female	443	459	484	431
	Others	0	0	0	0
General	Male	71	68	64	66
	Female	58	51	52	51
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		1324	1325	1313	1251

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Architecture	[View Document](#)
Chemistry	[View Document](#)
Civil Engineering	[View Document](#)
Computer Applications	[View Document](#)
Computer Science And Engineering	[View Document](#)
Electrical And Electronics Engineering	[View Document](#)
Electronics And Communication Engineering	[View Document](#)
Information Technology	[View Document](#)
Mathematics And English	[View Document](#)
Mechanical Engineering	[View Document](#)
Mechatronics	[View Document](#)
Physics	[View Document](#)

3. Extended Profile

3.1 Program

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
21	21	21	21	18

File Description	Document
Institutional Data in Prescribed Format	View Document

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4459	4329	4371	4097	4193

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of outgoing / final year students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1228	1194	1243	1225	1144

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4569	4530	4543	4569	4442

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of revaluation applications year-wise during the last 5 years

2017-18	2016-17	2015-16	2014-15	2013-14
565	661	612	715	612

3.3 Teachers

Number of courses in all programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1161	1130	1102	1022	920

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

Number of full time teachers year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
273	276	266	273	259

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
290	293	293	293	275

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

3.4 Institution

Number of eligible applications received for admissions to all the programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9251	7558	8462	3900	3521

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1334	1334	1334	1334	1238

File Description	Document
Institutional Data in Prescribed Format	View Document

Total number of classrooms and seminar halls

Response: 99

Total number of computers in the campus for academic purpose

Response: 1677

Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
2559.76	3069.42	990.48	998.13	1295.99

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the Institution

Response:

Thiagarajar College of Engineering (TCE) aims at academic excellence through innovation in curriculum, content delivery and assessment. The institution has received autonomy in the year 1987 from University Grants Commission. Each department has chosen a specific theme area such as Wireless Technologies, Energy and Power Systems based on the state-of- the-art technologies, regional/global developmental needs, available infrastructure and faculty expertise in the institution. Further, Special interest groups (SIG) are formed to promote research and development pertaining to local, national and global needs in the chosen theme area. TCE already had much of the system in place by implementing competency based curriculum since 2008. This led to a smooth transition to much enhance Outcome Based Education (OBE) in the year 2014.

Process of Designing curriculum at TCE:

Credit distribution of higher learning institutions from India/Abroad, AICTE /Anna University Guidelines, Professional Societies such as ACM, IEEE, ASME etc.,, Institution's Choice Based Credit System (CBCS) Regulations, Graduate Attributes of National Board of Accreditation, the requiremets of Engineering Projects in Community Services (EPICS) are considered to design overall curriculum framework and assign credits for the curricular components.

The syllabus of each course is designed using the 'concept map' to attain the competencies. The components of courses are chosen Preamble, Program Outcomes, Course outomes, Assessment Pattern as per Bloom Taxonomy, Course Level Learning Objectives, Concept Map, Syllabus, Text and Reference Books and Lecture Schedule. In order to identify first level course outcomes in each SIG, inputs from Programme Outcomes (POs) and Programme Specific Outcomes (PSOs), Internal and External stakeholder feedback are taken into account. Subsequently, courses for each curricular component in each SIG are identified. Then, course map is prepared based on pre-requisites. This is followed by preparing scheduling of courses and credits for each course. The course designers prepare course outcomes with corresponding Bloom's level and target level of attainment followed by course design. The Board of studies and Academic council are constituted every semester for approval of syllabus.

Salient features of curriculum @TCE:

- Curriculum has been designed in collaboration with TVS Motors for Mechanical Engineering and Electrical and Electronics Engineering programmes.
- Industry supported courses are offered in association with industries such as Honeywell, Motorola, TVS Motors etc., to promote employability.
- To improve interdisciplinary learning, General Elective courses were introduced. Two general

elective courses are mandatory.

- Flexible Elective and Guided Study courses have been introduced to support fast learners and to enable internships at industries.
- Courses on Engineering Design and Capstone have been introduced to improve the design capabilities. Rubrics are designed for evaluation of students' performance.
- Theory cum Practical course is introduced at each semester for integrated learning.
- Currently, OBE is aligned with Choice Based Credit System (CBCS). This has been fully implemented from the academic year 2015-16.

The institution is now moving towards the implementation Conceive-Design-Implement-Operate (CDIO) based curriculum framework to solve complex engineering problems pertaining to societal needs.

File Description	Document
Any additional information	[View Document](#)

1.1.2 Percentage of programs where syllabus revision was carried out during the last five years

Response: 100

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

Response: 21

1.1.2.2 Number of all programs offered by the institution during the last five years

Response: 21

File Description	Document
Minutes of relevant Academic Council/BOS meeting	[View Document](#)
Details of program syllabus revision in last 5 years	[View Document](#)

1.1.3 Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years

Response: 67.46

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
911	836	719	629	534

File Description	Document
Program/ Curriculum/ Syllabus of the courses	
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	
Average percentage of courses having focus on employability/ entrepreneurship	
Any additional information	

1.2 Academic Flexibility

1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years

Response: 23.08

1.2.1.1 How many new courses are introduced within the last five years

Response: 886

1.2.1.2 Number of courses offered by the institution across all programs during the last five years

Response: 3838

File Description	Document
Minutes of relevant Academic Council/BOS meetings	
Institutional data in prescribed format	

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 100

1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.

Response: 21

File Description	Document
Institutional data in prescribed format	

1.3 Curriculum Enrichment

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

Response:

The institution integrates cross cutting issues relevant to gender, environment and sustainability, human values and ethics by introducing specific courses in the curriculum and various activities such as Orientation Programmes for first year students, Women empowerment programmes and counseling activities. The academic courses that address these issues are listed in the following Table.

Course Code	Course Name	Programme	Factor addressed
14XX250	Environmental Science	All B.E./B.Tech. Programmes	Environment and sustainability
14CEGA0	Sustainable Development		
14CEGC0	Disaster Assessment and Mitigation Measures		
14EEGA0	Renewable Energy Sources		
14CEGE0	Road Safety		
14CEGF0	Basics of Climate Change and Policy		
14CS1F0	Green Data Center	B.E. Computer Science and Engineering	
14CE240	Engineering Geology	B.E Civil Engineering	
15ARPG0	Sustainable Architecture	B.Arch.	
15AR320	Climate and Architecture	B.Arch.	
14CE1D0	Green Construction	B.E Civil Engineering	
14CE440	Waste Water Engineering	B.E Civil Engineering	Professional Ethics/ Environment & sustainability
14CEPA0	Municipal Solid Waste Management	B.E Civil Engineering, M.E. Environmental Engineering	Professional Ethics/ Environment & sustainability
14XX470/14XX670	Professional Communication	B.E./B.Tech. Programmes and MCA	Professional Ethics
14CERG0, 14MERD0	Organizational Behavior	B.E./B.Tech. Programmes, MCA	
14EC610, 14IT710	Management Theory and Practice	B.E./B.Tech Programmes	
14ME710, 14EE710	Project Management	B.E./B.Tech Programmes	

In addition to these courses, the institution has Women Development Cell (WDC), counseling cell and anti-ragging cell to deal with the issues relevant to gender, human values and ethics. WDC is constituted to facilitate women development & safety and respect to women. WDC looks into any complaint from girls & women staff. WDC organizes seminars and invited lectures by domain experts to bring awareness towards women empowerment and legal rights.

With an emphasis on the need of counseling the young minds, counseling cell is constituted to address the student's behavioral and academic issues. It strives to provide an admissible atmosphere to the students by

organizing personality development camps to overcome the gender differences, conducting training programmes for the students and staff on counseling.

Anti-Ragging cell plans the activities like Anti-ragging campaign, formation of anti-ragging squad, Debate, Skits, Awareness talk by Government officials for curbing the ragging menace and making the students aware of human values. The cell addresses the complaints by the students, scrutinizes and approves the reports of the Anti-ragging Squad

1.3.2 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 80

1.3.2.1 How many new value-added courses are added within the last 5 years

Response: 80

File Description	Document
List of value added courses	[View Document](#)
Any additional information	[View Document](#)

1.3.3 Average percentage of students enrolled in the courses under 1.3.2 above

Response: 15.49

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
958	1063	399	410	514

1.3.4 Percentage of students undertaking field projects / internships

Response: 37.56

1.3.4.1 Number of students undertaking field projects or internships

Response: 1675

File Description	Document
List of programs and number of students undertaking field projects / internships	[View Document](#)

1.4 Feedback System

1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents for design and review of syllabus Semester wise /year-wise

A. Any 4 of above

B. Any 3 of above

C. Any 2 of above

D. Any 1 of above

Response: A. Any 4 of above

File Description	Document
URL for stakeholder feedback report	[View Document]()

1.4.2 Feedback processes of the institution may be classified as follows:
A. Feedback collected, analysed and action taken and feedback available on website

B. Feedback collected, analysed and action has been taken

C. Feedback collected and analysed

D. Feedback collected

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
URL for feedback report	[View Document]()

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.29

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
10	15	6	9	21

File Description	Document
Institutional data in prescribed format	[View Document]

2.1.2 Demand Ratio(Average of last five years)

Response: 5.6

2.1.2.1 Number of seats available year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1178	1178	1178	1178	1082

File Description	Document
Demand Ratio (Average of Last five years)	[View Document]

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 88.96

2.1.3.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1134	1197	1194	1189	1132

File Description	Document
Average percentage of seats filled against seats reserved	[View Document](#)

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

ACTIVITIES FOR ADVANCED LEARNERS

Advanced learners can register for more number of regular courses in a semester under choice based credit system and also industry supported courses.

Additional Elective courses are offered during fifth, sixth and seventh semesters in lieu of three Programme Elective courses scheduled for eighth semester. Students who have good academic record can choose one additional elective in a semester. Additional electives and industry supported one and two credit courses facilitate the students to avail internship/projects at industries.

Guided Study Course is offered to the students who do not have history of arrear and having greater than 8.0 CGPA. They can study ONE course during the third year Programme of study.

QEEE courses organized by IITs are offered to the academic excellence students during every semester. The students exhibiting academic excellences are motivated to attend guest lectures and online special courses to give exposure to acquire wide spectrum of knowledge in their domain area.

The institution encourages advanced learners to participate in competitions, workshops, e-courses like NPTEL, coursera, guest-lectures, association activities, professional society activities, TEQIP funded projects etc.

Students excel in academic are encouraged to actively participate in professional society, co-curricular and extracurricular activities like workshop, conference and competitions.

To motivate research-based learning among students, student projects are supported with TEQIP funds.

ACTIVITIES FOR SLOW LEARNERS

Most of the students in our institution are from rural areas and vernacular medium. The vernacular medium, lateral entry and vocational stream students find it difficult to cope up with the academic system. To overcome these difficulties, the following activities are carried out:

- Counseling sessions are arranged for weak students based on their performance in Continuous assessment test for each Course.
- Parent teacher meeting is conducted for those students, who failed in end semester examination.

- Bridge Course is conducted every year for Lateral Entry Students.
- Remedial Classes are arranged for Third Semester Lateral Entry Students (150 Students). These classes are conducted between 4.30pm to 6.30pm on all working days and 9.00am to 5.00pm on Saturdays
- English Fluency Class is conducted for Second and third year Tamil medium and vocational students (250 students) so that their soft and communication skills are improved.
- Remedial Classes are conducted between 4.30pm to 6.30pm on all working days and 9.00am to 5.00pm on Saturdays, in bilingual mode (Tamil and English) for First Semester students (100 Tamil Medium and Vocational students).
- Soft Skill Development Program: Training is provided for students regarding Communication Skill Development, placement, and career development. A special program is arranged for 300 third and final year Lateral Entry Students
- Special Coaching Classes are scheduled with specific date and time for each course for the students who have arrears are identified from End Semester Results. This has been scheduled before supplementary exam schedule. These classes are conducted without affecting the regular classes.

File Description	Document
Any additional information	View Document

2.2.2 Student - Full time teacher ratio

Response: 16.33

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.11

2.2.3.1 Number of differently abled students on rolls

Response: 5

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document

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

Response:

The institution offers flexibility to students to choose the courses in each semester based on their career plan and preference for faculty. The courses offered by industry experts provide experiential learning for

the students by bridging the gap between academia and industry.

The pedagogy group of the institute has organized training programmes/ workshop on Pedagogical tools and practices for faculty. Subsequently, the faculty adopted different content delivery methods based on the nature of the courses. The consolidated list of content delivery methods being practiced by faculty is as follows:

- Learning Management Systems like Wikispaces, MOODLE, CANVAS, Edmodo
- Customized Course Plan incorporating active learning strategies, formative and summative assessment methods for each course outcome.
- Active learning methods like flipped classroom, Think Pair share, Role play, Mini Projects, Peer Instruction and Problem Based Learning
- Collaborative learning methods like Jigsaw, Group projects, Group discussions online and offline
- Analysis of learning styles of students and adopting multimodal content delivery methods to address different learning needs of the students
- Sharing of Best Practices in Teaching and Learning in Faculty meetings
- Tutorial sheets/worksheets to improve problem solving ability
- Peer assessment and coaching to enhance learning experience
- Miniprojects, video presentation by students
- Study of Research papers

The design courses in B.Arch. degree programme provide experiential learning to discern and make decisions with the aid of both objective information and subjective attitudes, based on reason.

General elective courses are offered to supplement interdisciplinary learning. Foundation elective courses are offered by Mathematics and Science departments to all undergraduate programmes to enhance foundation knowledge. Guided study courses are offered to promote self learning of the students.

The special interest group SIG activities such as learning concepts beyond curriculum, participating in hackathons and in reputed conferences, getting associated with sponsored projects of faculty and publishing technical papers in reputed journals impart enhanced learning experience

The institution has implemented a flexible pattern in continuous assessment for post graduate programmes to enhance the problem solving and design capabilities. The pattern has three in major components namely knowledge, presentation and professional practice. In each component, a list of assessment methods has been prescribed in consultation with faculty in the workshop organized by the institution. Faculty members can choose one of the methods in each component based on the nature of the course.

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 76.19

2.3.2.1 Number of teachers using ICT

Response: 208

File Description	Document
List of teachers (using ICT for teaching)	[View Document](#)
Provide link for webpage describing the " LMS/ Academic management system"	[View Document](#)

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 18.58

2.3.3.1 Number of mentors

Response: 240

2.3.4 Preparation and adherence to Academic Calendar and Teaching plans by the institution

Response:

The process for the preparation of academic calendar is as follows:

- Formulate Academic Calendar Committee with a committee consisting of the Registrar, the Controller of Examinations, Pedagogy group coordinator/Associate Dean (Teaching and Learning) and Faculty-in- charge.
- The faculty-in-charge collects the activities of the academic year from Associate Dean (TLP), Controller of Examinations, Dean (Research), Dean (Students), Dean (Industry Institute Interaction and Heads of the department.
    - Teaching learning process activities with the schedule for start date of course registration, preparation of class time table, commencement of classes, uploading course plan, withdrawal from registered courses continuous assessment tests, assignments, class committee meetings, project reviews, submission of synopsis, submission of project reports, viva voce, B.Arch Dissertation review, last date for mark entry in learning management system, Board of Studies, Academic Council, industrial visits, parent teacher meetings, programme performance assessment committee meetings and faculty vacation.
    - Schedule for Regular and Terminal examinations, practical examinations, publication of results, Last date for payment of examination fee and submission of revaluation applications.
    - Department association activities.
    - Research & development activities.
    - ?Personality Development Camp details.

- - Staff Mobile numbers and Intercom numbers.
    - List of holidays, alumni day celebration
  - Faculty-in- charge prepares draft copy of the Academic Calendar incorporating all the activities collected.
  - Registrar conducts Academic Calendar Review meeting with Deans and HODs.
  - Faculty-in-charge incorporates suggestions given in the review meeting.
  - Registrar convenes the standing committee for the approval of the academic calendar
  - Faculty-in-charges gets the Academic calendar printed and distributes to faculty, staff & students and publishes the soft copy of Academic calendar in website.

Adherence to Academic Calendar:

All activities are conducted by the respective HoDs/Deans/Controller of Examinations/ Registrar as per the academic calendar. The industry supported courses are conducted as per the availability of the experts from industry. Normally, few scheduled activities are deviated due to some unavoidable circumstances like placement, declaration of holidays under negotiable instruments act by the Government.

Teaching Plans:

In our institution, the teaching plans (Course plans) are prepared by the faculty at the beginning of the semester and uploaded in the Learning Management Software (LMS). Students can view the plan and prepare accordingly. The teaching plan contains the module number, topic name, number of hours, teaching methodology and date.

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 93.3

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	[View Document](#)

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 57.04

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
169	165	156	145	134

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document

2.4.3 Teaching experience per full time teacher in number of years

Response: 13.28

2.4.3.1 Total experience of full-time teachers

Response: 3626

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 46.03

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23	35	16	33	17

File Description	Document
Institutional data in prescribed format	View Document

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 3.74

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
11	11	11	11	10

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years

Response: 21

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
18	21	22	22	22

File Description	Document
List of programs and date of last semester and date of declaration of result	[View Document](#)

2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 13.97

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
565	661	612	715	612

2.5.3 Average percentage of applications for revaluation leading to change in marks during the last five years

Response: 22.4

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
134	163	133	136	140

File Description	Document
Any additional information	[View Document](#)

2.5.4 Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

Response:

- The institution has automated academic and examination process.

- The institution has adopted a revised assessment pattern for postgraduate programmes from the academic year 2017-18 in continuous internal assessment. An interim assessment to measure knowledge/concept level understanding, presentation skill and professional skill is introduced in the revised assessment pattern.

- The Controller of Examinations (CoE) office has adopted student centric and transparent practices by automating the examination processes. Starting from course registration to publication of results is carried out digitally, resulting in error free and faster operation. The examination schedule is published in automated software and students can view it using mobile app also. All announcements are made using automated software so as to reach all stakeholders instantly.

- The semester examination answer scripts are first assigned dummy numbers based on bar code. The examiners who evaluate the answer scripts do not know the identity of the students.

- The system of issuing hall tickets has been abolished for the students on roll in the current academic year as the students have valid ID card. This saves time and efforts required for printing and distributing the hall tickets.

- The appointment orders for setting question papers and evaluation are issued through mail. The examiners upload the soft copy in encrypted form. This ensures confidentiality as well as ease of operation. The question paper uploaded by the examiner is directly printed so as to avoid spelling mistakes, errors in figures etc.

- Academic verification of the credentials of the passed out students is also performed by the office online. Any recruiter or the student can apply online to verify the genuineness of the degree and marks. Result of verification is also communicated to the applicant online.

- After the publication of the results, the students can go-through their answer scripts and scheme of evaluation. If the student feels that there is scope for additional marks, they can also apply for revaluation with specific appeal. The appeals are examined by faculty during revaluation of the answer paper and verified by Head of the department. This improves fairness.

- Examination squads are constituted to ensure fair conduct of theory examinations and also to verify adherence to norms and rules to be followed.

- Periodically, the question papers of semester examinations are subjected to academic audit by

experts from higher learning institutions in order to identify scope for improvement in the standard of questions. For the use of the students, all the question papers of the previous examinations are published in the website in the form of archive for access by the students.

- A student, who has got pending arrears after programme completion can apply online for arrear examinations. This facilitates ease for both students and COE office.

- Thus, the adoption of IT in the entire chain leads to significant advantages to students, supporting staff and faculty and ultimately to the institution

2.5.5 Status of automation of Examination division along with approved Examination Manual
A. 100% automation of entire division & implementation of Examination Management System (EMS)

B. Only student registration, Hall ticket issue & Result Processing

C. Only student registration and result processing

D. Only result processing

Response: A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	[View Document](#)
Current Manual of examination automation system	[View Document](#)

2.6 Student Performance and Learning Outcomes

2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

Response:

The institution implemented competency based curriculum in the academic year 2008-09 and subsequently it was refined in alignment with the accreditation policy of National Board of Accreditation and offered as Outcome Based Education (OBE). In OBE, the Programme Educational Objectives (PEO), Programme Specific Outcomes (PSO), Programme Outcomes (PO) of each programme are prepared as follows. The initial draft of PEOs, PSOs and POs is prepared by the head of the department, the coordinator for Teaching and Learning Process, the program coordinator and senior faculty members of the department, based on the Vision/Mission of the department, theme area of the department, feedback from internal and external stakeholders and the graduate attributes. The initial draft is refined in the department faculty

meetings in alignment with the Vision and Mission of the department. This process is repeated and refined further and the final version is placed in Board of Studies (BoS) meeting for discussion. The suggestions/comments given by the members of the BoS are incorporated and the refined PEOs, PSOs and POs are submitted to the standing committee of the Academic Council to pass it to the Academic Council Meeting (ACM). The suggestions/comments given by the members of the Academic Council are incorporated and the final version of the PEOs, PSOs and POs are published and disseminated to the internal and external stakeholders.

Sample activities for communicating the Vision, Mission and PEO, PSO and PO are as follows:

Activity	Schedule	Stakeholder
First Semester Orientation Programme	One Week before the commencement of first semester classes	First Semester Students
Association Inaugural Function	As per the Academic Calendar	Senior Students
Faculty Meeting	First faculty meeting in every semester	Faculty
Technical/Support Staff Meeting	First meeting in every semester	Support/Technical Staff
Parent Teacher Meeting	As per the academic Calendar	Parents
Alumni Meeting	As per the schedule by Alumni Association	Alumni
Board of Studies Meeting	As per the academic calendar	Industry personnel, alumni, experts from higher learning institutions
Industry Supported Courses	Scheduled based on the availability of the experts who are offering the course	Industry personnel
Events organized Professional societies	As per the schedule finalized by the staff coordinator	Professional Society

Sample Course Outcomes:

Programme: B.E. (Electronics and Communication Engineering)

Course Name: Signal Processing

S.No	Course Outcomes
CO1	Compute DFT and IDFT coefficients of a given discrete time sequence using Fast Fourier Transform algorithms
CO2	Design IIR digital filters from analog filters for a given specification
CO3	Design Linear phase FIR digital filters using windowing and frequency sampling methods
CO4	Draw the implementation structure of IIR and FIR discrete time systems using block diagram and signal flow graph representation.
CO5	Compute statistical parameters like mean, correlation and psd of a given random variable or random processes at the output of a LTI system
CO6	Analyze the spectral characteristics of time dependent and random signals
CO7	Design LTI systems for noise reduction & signal enhancement, linear prediction and analyzing

the effects of finite precision representation of system coefficients and truncation/rounding of intermediate computation.

File Description	Document
Any additional information	[View Document](#)

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

The assessment tools for measuring attainment of Course Outcomes:

- Continuous Assessment Tests

The question papers are set based on the assessment pattern and the Bloom's Cognitive level.

- Assignments

The assignments are given at the higher order cognitive levels of the course. The assignments are in the form of worksheets. Quiz, open book test, mini projects, case studies, seminar presentation, review of journal papers etc.

- Terminal Examination

The question papers are set based on the assessment pattern and the Bloom's Cognitive level.

- Project Review:

Three project reviews are conducted and the assessment is based on rubrics

- Course Exit Survey

This survey is obtained before the start of the next semester

In our institute, OBE has been in practice from the academic year 2014-15. All the questions in continuous assessment tests, terminal examination and assignments and activities are mapped with course outcomes. The course outcomes are measured based on the performance in continuous assessment tests, assignments, terminal examination and course exit survey. However, for the graduates passed out in the academic years 2015, 2016 and 2017, student marks for each question in the test, exam and assignment have not been recorded. Hence, the course outcomes for these graduates are measured based on the cumulative continuous assessment marks and performance in terminal examination. The target for COs in a course is

set based on the performance in the course by the graduated students in the academic years 2012, 2013 and 2014.

The expected proficiency of each course is set based on the cumulative probability (from the highest grade) of the grades obtained by the batch of students 2008-2012, 2009-2013 and 2010-2014. The expected attained level (Number of students in percentage) is fixed as 20% more than the average number of students in the last three batches.

The direct and indirect performance assessments tools for POs and PSOs are as follows:

Direct Assessment Tools

Assessment Tool	Purpose	Measurable COs/POs
Three Internal Assessment Tests	Measuring continuous improvement	In each case, attainment of the COs is measured and it is used to measure POs which are directly mapped.
Terminal Examination	Testing of acquired knowledge	
Laboratory Continuous Assessment	Pruning of Domain knowledge skills and usage of modern tools & techniques	
Internal & External Laboratory Examination	Testing of domain knowledge skills and usage of modern tools & techniques	
Assignments/Projects/Seminars	Testing of domain knowledge, Communication Skills & writing skills, self learning along with ethical standard, teamwork, entrepreneurial skills of identifying the scope of new products	These are helpful in the attainment of various POs and PSOs.
Quiz	Testing of domain knowledge, Communication Skills	

Table 2: Indirect Assessment Tools

Assessment Tool	Purpose	Measurable POs and PSOs
Course exit survey	Effective Content delivery Professional & Ethical practices	All POs and PSOs are measured using indirect assessment tools.
Graduates exit survey	Evaluate the attainment of individual program outcome	

Percentage level for the attainment of POs

Component	Percentage	
Curricular Component	60%	

Co-Curricular Component	20%
Graduate Exit Survey	20%

2.6.3 Average pass percentage of Students

Response: 89.5

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 1099

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 1228

File Description	Document
List of programs and number of students passed and appeared in the final year examination	[View Document](#)

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.17

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

Response: Yes

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View Document
URL of Policy document on promotion of research uploaded on website	View Document

3.1.2 The institution provides seed money to its teachers for research (average per year)

Response: 188.3

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
268.89	233.75	138.44	110.15	190.25

File Description	Document
Minutes of the relevant bodies of the Institution	View Document
List of teachers receiving grant and details of grant received	View Document
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document

3.1.3 Number of teachers awarded international fellowship for advanced studies/ research during the last five years

Response: 3

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	0	0	1	1

File Description	Document
List of teachers and their international fellowship details	[View Document]
e-copies of the award letters of the teachers.	[View Document]

3.1.4 Institution has the following facilities

1. **Central Instrumentation Centre**
2. **Animal House/Green House / Museum**
3. **Central Fabrication facility**
4. **Media laboratory/Business Lab/Studios**
5. **Research / Statistical Databases**

A. Any four facilities exist

B. Three of the facilities exist

C. Two of the facilities exist

D. One of the facilities exist

Response: A. Any four facilities exist

File Description	Document
Institutional data in prescribed format	[View Document]

3.2 Resource Mobilization for Research

3.2.1 Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments,Chairs in the institution during the last five years (INR in Lakhs)

Response: 1638.11

3.2.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
184.12	128.42	72.19	568.83	684.55

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document

3.2.2 Number of research centres recognised by University and National/ International Bodies

Response: 9

3.2.2.1 **Number of research centres recognised by University and National/ International Bodies**

Response: 9

File Description	Document
Names of research centres	View Document
Any additional information	View Document

3.2.3 Percentage of teachers recognised as research guides

Response: 41.48

3.2.3.1 **Number of teachers recognised as research guides**

Response: 112

3.2.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 270

File Description	Document
Details of teachers recognized as research guide	View Document
Any additional information	View Document

3.2.4 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 1.43

3.2.4.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 77

File Description	Document
Supporting document from Funding Agency	[View Document](#)
Any additional information	[View Document](#)
link to funding agency website	[View Document](#)

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

Response:

a).Entrepreneurship Development Cell:

The Entrepreneurship Development Cell (**EDC**) of the institute comes under the ambit of Industry institute interaction. Under the supervision of Dean (III), the Associate dean and department level coordinators EDC organizes the work plan of the Entrepreneurship promotion activities. The cell has **Student CEO** and **Student Vice President** to take care of the activities of E-cell. It is affiliated to Young Indians Students Chapter, Confederation of Indian Industry (CII) and Native Lead Foundation, who are funding the startups. TCE is empanelled under PM –YUVA and also a special elective course on "Entrepreneurship Development "is being taught for the last seven years. It has an exclusive 1200 square feet area with 20 co-working space, one number of Rapid Prototyping machine with 3D Printer and system facilities. The E-Cell conducts events such as Starturpreneur, Bazaar day, Mr. Manager, Discoverer or innovator, Business model boot camp and Hackathons, Biz plan, E-quiz on business, etc and organizing guest lectures to motivate the students in entrepreneurship.

b).Technology Business Incubator

During 2014, a Technology Business Incubator (TBI) has been established in Thiagarajar College of Engineering under the aegis of DST, India, with objectives (i) to facilitate commercialization of R&D technologies, (ii) to promote faculty to incubate start-up companies in collaborative mode and (iii) to facilitate alumni and local entrepreneurs to establish start-up venture. Currently 4 start-up companies developing software are in place.

c).European Technology Experience centre

European Business and Technology Centre (EBTC) and TCE have embarked together to form an institutional collaboration to support and facilitate European and Indian partnerships at the business, research, and entrepreneurship levels. In TCE, European Technology Experience centre (ETEC) has been established and is an entrepreneurial environment where students, researchers, entrepreneurs can explore

new technologies, learn about technology developments and research carried out by their counterparts in EU and India. This centre facilitates Indian Start-ups/ entrepreneurs / researchers / to collaborate and do joint projects and develop products in water and clean energy technologies.

d).EDII Nodal Hub @ TCE

Entrepreneurship Development and Innovation institute, Tamil Nadu has launched "Innovation and Entrepreneurship Development program (IEDP)" to promote entrepreneurship among students. TCE has been recognized as the Nodal centre to promote entrepreneurship activities in colleges in and around Madurai region. EDII hub @ TCE caters the entrepreneurship promotion activities in 32 spoke institutes that are Engineering, Science, Arts and Management. EDII hub @ TCE organizes E leader programme, Business plan contests, startup activation program, Boot camps and Idea contests. The selected ideas are also considered for further funding by TBI @ TCE after series of mentoring with due diligence.

e).Thiagarajar Entrepreneur Network (TEN)

Thiagarajar Entrepreneur Network (TEN) is the alumni entrepreneur network association formulated in 2017 and launched by TCE and its Alumni Entrepreneurs. This network has so far received registration from 300+ alumni entrepreneurs and has chapters in other cities like Chennai and Bangalore. TEN act as a platform for the interaction between aspiring student entrepreneurs and successful alumni entrepreneurs.

File Description	Document
link for additional information	View Document

3.3.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

Response: 100

3.3.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry- Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
21	27	20	23	9

File Description	Document
Report of the event	View Document
List of workshops/seminars during the last 5 years	View Document

3.3.3 Number of awards for innovation won by institution/ teachers/ research scholars/students

during the last five years

Response: 148

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	59	22	27	16

File Description	Document
List of innovation and award details	View Document
e- copies of award letters	View Document

3.3.4 Number of start-ups incubated on campus during the last five years

Response: 7

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	1	3	0	1

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	View Document
e- sanction order of the Institution for the start ups on campus	View Document
Contact details of the promoters for information	View Document

3.4 Research Publications and Awards

3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document
Institutional data in prescribed format	View Document

3.4.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: Yes

File Description	Document
e- copies of the letters of awards	[View Document](#)
Any additional information	[View Document](#)

3.4.3 Number of Patents published/awarded during the last five years

Response: 12

3.4.3.1 Total number of Patents published/awarded year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	3	1	3	3

File Description	Document
List of patents and year it was awarded	[View Document](#)
Any additional information	[View Document](#)

3.4.4 Number of Ph.D.s awarded per teacher during the last five years

Response: 1.75

3.4.4.1 How many Ph.Ds are awarded within last 5 years

Response: 196

3.4.4.2 Total number of teachers recognised as guides during the last 5 years

Response: 112

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	[View Document](#)
Any additional information	[View Document](#)
URL to the research page on HEI web site	[View Document](#)

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 3.02

3.4.5.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
170	110	162	188	183

File Description	Document
List of research papers by title, author, department, name and year of publication	[View Document](#)

3.4.6 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years

Response: 1.98

3.4.6.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
55	96	99	115	168

File Description	Document
List books and chapters in edited volumes / books published	[View Document](#)

3.4.7 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Response: 4.05

File Description	Document
BiblioMetrics of the publications during the last five years	[View Document](#)
Any additional information	[View Document](#)

3.4.8 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

Response: 30

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View Document
Any additional information	View Document

3.5 Consultancy

3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual

Response: Yes

File Description	Document
Soft copy of the Consultancy Policy	View Document
Minutes of the Governing Council/ Syndicate/Board of Management related to Consultancy policy	View Document
URL of the consultancy policy document	View Document

3.5.2 Revenue generated from consultancy during the last five years

Response: 152.24

3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
80.51017	12.03388	27.60044	16.01937	16.07858

File Description	Document
List of consultants and revenue generated by them	View Document
Audited statements of accounts indicating the revenue generated through consultancy	View Document

3.5.3 Revenue generated from corporate training by the institution during the last five years

Response: 1.97

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0.15	.48	.448	.448	.448

File Description	Document
List of teacher consultants and revenue generated by them	[View Document](#)
Audited statements of account indicating the revenue generated through training	[View Document](#)

3.6 Extension Activities

3.6.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

3.6.1 Extension Activities for Neighbourhood Community

Polymer - Bitumen Mix Road

Padmashri. Dr.R.Vasudevan has been instrumental in laying plastic road of about 1,00,000 kilometers with a innovative polymer Bitumen mix technology for which the Indian Road Congress has given a code. He has laid road throughout India for State Government, DRDA, NRRD and MoE&F. He has been conferred a number of prestigious awards including Padmashri by Govt. of India.

EPICS - 2017 onwards

TCE is the member of Purdue University's Engineering Projects in Community Services (EPICS) programme since 2017 and also in IEEE-EPICS Consortium - Chennai Chapter. It facilitates students to do community based projects through human-centered design approach. Twenty faculty members have been trained in Design Thinking by Prof. Willaim Oakes of Purdue University.

Tree walk - Dec-2017

This program is to identify the species of flora and fauna inside TCE campus and was organized by college NSS along with Prof. Stephen, American College Madurai Green Foundation and Dhan Foundation, Madurai on 17th Dec 2017. This walk had audience from Madurai Medical College, CSI

Nursing college and TCE. The group labeled about 100 species, their name , biological name, medicinal usage and their origin.

Vaigai River Restoration Project - Dec 2015- Jan 2016

This project was done by TCE and Graduate school of Architecture, Columbia University, USA focusing on reimagining issues of River Vaigai and the Urbanism in Madurai. Nearly 15 students from Columbia university and 78 students from Department of Architecture participated. The proposals were drawn on rethinking Madurai river channels for future development, creating a food hub and spoke networks and Riparian zones, water inequity and reconnecting the tank system.

Vaigai River Restoration Pageant & Project: Jan 2014 – April 2014

This project is a social action art initiative to restore the sacred Vaigai River which is in a severe environmental crisis due to pollution, waste dumping, and the drying effects of climate change. The project raises awareness to mitigate toxic chemical pollution and contamination, poor water flow and promotes ecologically sustainable solutions for irrigation and safe drinking water. Performances by local artists and community groups include theater, dance, songs and poetry are done highlighting current issues and future restoration of the river.

ICHARVEST - 2012

A project named ICHARVEST sponsored by DST, basically provides technical training namely English communication skill, computer usage and Printed Circuit Board fabrication for the rural women. A village named Vilachery where about 25 women were trained in the above said skills. The outcomes are empowerment of rural women, trained women workforce and improved employment for women to attain economic independence along with awareness on children education, cleanliness, food and nutrition, savings and family health.

ETEC Industry Survey - 2015

European Technology Experience Centre, a unit of EBTC, Bangalore conducted industry survey in southern part of Tamilnadu to identify the technology needs and to implement / develop green technology solutions. About 50 industries were surveyed and a report on the proposed green technologies for theses industries were presented to Fraunhofer,MOEZ, Germany.

File Description	Document
link for additional information	View Document

3.6.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 52

3.6.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
14	6	16	9	7

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

3.6.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 181

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
44	59	47	16	15

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document

3.6.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 72.01

3.6.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3310	2751	3408	3540	2428

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Government or NGO etc	View Document

3.7 Collaboration

3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

Response: 79

3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
134	68	109	41	43

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document
Copies of collaboration	View Document

3.7.2 Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years

Response: 435

3.7.2.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
139	115	64	56	61

File Description	Document
e-copies of linkage related Document	View Document
Details of linkages with institutions/industries for internship	View Document

3.7.3 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 30

3.7.3.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
6	7	5	5	7

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance,other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc

Response:

Facilities for Teaching & Learning Process

Classrooms

Number of classrooms : 92 (Seating Capacity of 40 to 75)

- All classrooms are equipped with Multimedia Projector, Podium, Fan, Light, Table with chair, Glass board with good ambience, adequate lighting and good ventilation.
- All classroom size is equal to or more than that stipulated by statutory bodies.
- One classroom of each department is equipped with Lecture Capturing System.
- Media Laboratory has camera, editing and casting facility to record lectures.
- All classrooms are enabled with wi-fi facility to implement Active Learning through MOOCs, Plicker, Clickers, etc.,

Tutorial Rooms

Number of Tutorial rooms : 16 (Seating Capacity of 30 to 40)

- This tutorial hall is equipped with LCD Projector, Wi-fi, White Board, and chairs attached with writing pad.

Seminar Halls

Number of Seminar Halls : 7 (Seating Capacity of 50 to 100)

- Seminar Halls are equipped with LCD Projector with Smart board facility, Wi-Fi, Audio and Video facilities for effective Teaching learning process.

Drawing Hall

Number of Drawing Hall : 3 (Seating Capacity of 30 to 70)

- Drawing halls are equipped with Drawing tables, Chairs, Fans, Light with good ventilation and ambience.

Laboratories

Number of Laboratories : 89(Seating Capacity of 30 to 60)

- All Laboratories are equipped with state of the art facilities with adequate safety measures and periodic maintenance mainly system maintenance, antivirus updations, software updations, calibration and servicing.

- Few of the Laboratories are funded by International Companies like National Instruments, AlteraVLSI, Agilent Technologies, National Instruments, Motorola, Honeywell, Bentley, Microsoft, IBM, Siemens , TVS Motor etc., in Civil, ECE, EEE, CSE Mechanical and IT departments.

Asynchronous Learning Facilities

- QEEE - A classroom with Web casting facility (Audio, Video Recording, Microphones, Speakers, Camera etc.,) to facilitate the students and the teachers to engage themselves in Webinars.
- Central Library - supports institute programme of study and research. The collection includes

Text book	98309 Nos
International Journals	67 Nos
National Journals	75 Nos
International Magazines	56 Nos
National Magazines	32 Nos

- Library is also enabled with Wi-Fi and RFID Technology for self issue and return.
- All Departments are having department library for ready reference

Computing Facility

- A Central Computing Centre (CCC) with 150 Desktop Computing Systems is functioning from 8.00 a.m to 10.00 p.m for Monday to Saturday and 8.00 a.m to 6.00 p.m on Sundays.
- A computing centre with 30 Desktop Computing systems is functioning in the Ladies and Gents Hostel by 24/7 mode.

A total of nearly 1600 computer systems are spread across all the laboratories and departments to facilitate the students and faculty members to conduct classes, laboratory classes and carry out research.

File Description	Document
Link for Additional Information	[View Document](#)

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

Response:

Physical Education Departments Facilities

TCE has well equipped sports facilities to cater the sports and games requirement of the students. Every year around 500 students participate in all the sports and games event. TCE conducts ANNA University zonal tournaments, Inter zonal tournaments, Intra and Inter department tournaments and Intra moral tournaments, TCE Marathon, Founder Memorial Hockey and Kho-Kho tournament and Dr. Radha Thiagarajan Memorial Chess tournament. TCE has won ANNA University zone 16 overall champion for the continuous 8 years. Four Students have Guinness record in Taekwondo. three students have represented in National and International level Pistol Shooting competition.

Indoor stadium

TCE has well equipped and furnished Indoor stadium (Ground Floor and 1st floor) of size 23,674 square feet with seating capacity of 300 Nos.

Indoor Stadium - Ground Floor

- Badminton Court (13.40mX6.10m)

a.Number of Courts-4

b.Number of Movable Post-4 (Pair)

- Basketball Court (28mX16m)

a.Number of Court-1

b.Number of Movable Post-1(Pair)

- Volleyball Court (18mX9m)

a.Number of Court-2

b.Number of Movable Post-2(Pair)

- Judo hall (12mX11m)

a.Number of Courts-2

Indoor Stadium - First Floor

- Chess Hall (5.90mX21.30 m)

a.Number of Board-150

b.Number of Magnetic Chess Board-01

c.Number of Table-04

d.Number of Sitting Table-06

- Table Tennis (6mX21m)

a.Number of Board-03

b.Number of Posts-03 (Pair)

- Gym Hall (13mX12m)

a.Body building equipment

b.Weight Lifting accessories

- Yoga Hall (12mX9m)

a.Yoga mats-30

Outdoor Games

- Ball Badminton Court (24mX12m)

a.Number of Court-2

b.Number of Post-2 (Pair)

- Basket Ball (28mX16m)

a.Number of Court-1

b.Number of Post-1 (Pair)

- Football Field (90mX50m)

a.Number of Court-1

b.Number of Post-1 (Pair)

- Hockey Field (91.40mx55m)

a.Number of Court-1

b.Number of Post-1 (Pair)

- Kho-Kho Court (27mX16m)

a.Number of Court-2

b.Number of Post-2 (Pair)

- Kabaddi Court(13m X 10m)

a.Number of Court-1

- Tennis Court (23.76mX 10.97m)

a.Number of Court-2

b.Number of Post-2 (Pair)

- Volleyball Court (18m X 9 m)

a.Number of Court-2

b.Number of Post-2 (Pair)

Cultural Activities

- TCE cultural association has a Dean, Associated Deans, Department Level coordinators and student level coordinators as members.
- The college has three auditoriums, Fully Air Conditioned Karumuttu Sundaram Auditorium with a seating capacity of 204 and Karumuttu Manickavasagam Chettiar Auditorium with a seating capacity of 800. An Open air auditorium of seating capacity 2000 to conduct college cultural activities.
- SHRISHTI,the cultural programme of TCE has activities on Performing Arts and Fine Arts. Clubs like English Literature, Tamil Literature, Fine Arts, Visual Arts, Photography and Quiz organises an orientation program for the first years and select the interested students and gives them training to horn their interest in respective fields.
- The Performing Arts team of the Association does regular shows for the students on Women Empowerment, Curbing Drug Menace and other social causes.
- The cultural association conduct yearly special events like SPIC MACAY, QUEST and special lectures from eminent arts personalities regularly.

File Description	Document
link for additional information	[View Document](#)

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 99

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	[View Document](#)
Link for additional information which is optional	[View Document](#)

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 22.39

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
194.38	375.700	202.391	373.659	443.725

File Description	Document
Audited utilization statements	[View Document](#)

4.2 Library as a Learning Resource

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

Response:

1 Library is automated using integrated library management system (ILMS)

- Name of the LMS – AUTOLIB

- Year of Automation – from 2005 LIBSYS, From 2014 AUTOLIB
- Version – Advanced version with JAVA
- Partial / Fully - Fully Automated with RFID enabled technology , SMS for each transactions

Library Carpet Area: 12840 Sq.ft.

Seating Capacity: 250

Library Working Hours:

- Monday to Friday: 8.00 AM. TO 7.00 PM.
- Saturday: 9.00 AM. TO 4.40 PM.
- Morning shift - 8.00 Am to 4.00 PM & Evening shift -11.00 Am to 7.00 PM
- Library will be closed on all Sundays and public holidays

Number of Library staff: 8

Library staff with Degrees: 6

Number of books added

• (April to march)	Number of new titles added	Number of newvolumes added
2014-15	984	2873
2015-16	515	1076
2016-17	567	1419
2017- 2018 (march 20th)	678	2036

Number of Hardcopy of Journals added :

Year (Jan to Dec)	No. of journals / Magazines subscribed
2015	116
2016	147
2017	138
2018	230

Usage report (Last three years)

Library usage vs. user count for last three years		
Year	User count (no. of login)	Usage (No. of transactions)
2015	47222	71504
2016	51304	68333
2017	43527	53493

Quality learning resources at TCELibrary (Hard / Soft)

RESOURCES	Total No. of Volumes	Total No. of Titles
BOOKS	83404	54315
BOOK BANK BOOKS	14126	4184
CD's and DVD's	1212	1212

JOURNALS (Hard copy)	124	124
TECHNICAL MAGAZINES (Hard copy)	106	106
ONLINE JOURNALS (IEL, Science Direct, ASME, ASCE, Springer, EBSCO)	40885	40885
E-BOOKS (PERPETUAL ACCESS)	603	603
Knimbus open access (E-Books)	84707	84707

E-Journals

TCE- Online journals subscription details (2018)	
NAME OF THE PACKAGES	NO. OF JOURNALS
IEL (Journals 497, Proceedings-29508, standards -3918)	33923
ASME	29
ASCE	36
SCIENCE DIRECT	275
SPRINGER	452
EBSCO (Art and architecture)	370
EBSCO (All Engg)	5800
Knimbus open access journals	25000
Total	65885

E-Books

Pearson	229
TLC Books	40
McGraw Hill	337
Knimbus open access E-Books	84707
Total	85313

Resources available at library for self learning :

Multimedia content (Access provided through Digital library)	
NPTEL videos	
MIT open course	
ISSER open course	10000+
Knimbus content	
TCE Mooc courses	

Library network / Automation

- Library software : Autolib JAVA with SMS facility
- Technology: RFID enabled library /Barcode
- Security systems: RF Gate with CCTV

- Available bandwidth : 1Gbps.
- Library Digital library systems: 25 nos.

Library consortium and membership:

- National Digital library
- N-List access through UGC
- INDEST
- DELNET

File Description	Document
link for additional information	[View Document](#)

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment

Response:

Details	Count	Links to verify
No. of a special collection available at the library (Total)	754	https://tce.new.knimbus.co cialCollection
No. of special collection procured during the last five years	245	
No. of E-Books available as a special and rare collection (on Teaching and learning methods)	40 perpetual access	https://tce.new.knimbus.co ult?searchId=Proquest&so e_str&_t=1537765568647

File Description	Document
Any additional information	[View Document](#)
link for additional information	[View Document](#)

4.2.3 Does the institution have the following

1. e-journals
2. e-ShodhSindhu
3. Shodhganga Membership

4.e-books

5.Databases

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 4 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 52.6

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
62.14	54.78	40.96	62.65	42.49

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document
Audited statements of accounts	View Document

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

4.2.6 Percentage per day usage of library by teachers and students

Response: 18.79

4.2.6.1 Number of teachers and students using library per day over last one year

Response: 889

File Description	Document
Any additional information	[View Document](#)

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

TCE has a well established state of the art IT- infrastructure and facilities for providing research, academic and consultancy support. The campus has been enabled with internet bandwidth of 1Gbps from National Knowledge Network (NKN) and BSNL 200 Mbps Internet Leased Line (ILL).

The IT services are provided on 24/7 support for anytime anywhere access to knowledge and learning resources. Around 2000+ LAN points are provided across the campus, computer labs and office spaces. Wi-Fi network points over 2000+ numbers were deployed across the campus, facilitating students and faculty members to access the academic content anywhere on campus with 24/7 internet service in academic blocks and hostels.

The Data center was established in 2011 with an area of around 645 sq ft for consolidating and managing network operations from various servers like App servers, DB servers and computer clusters into a single facility. Data center hosts all the servers to ease the provisioning and maintenance of the servers and Apps to the entire campus and back bone network running throughout the campus. It houses about 8 racks mounted with servers and computer cluster nodes for hosting a variety of services like

- TCE Website (Official Website of college)
- TCENet (Intranet Portal for the college)
- TCE Attendance Monitoring System (Staff Attendance Maintenance)
- Video Lecture streaming (stream Video Lectures of college)
- TCE Cloud (Cloud service of college for Research purpose)
- TCE Moodle (Learning Management System)

Server infrastructure includes high power computing HPC 32 nodes, 12 blade servers with 6 TB capacity. Enterprise firewall checkpoint has been deployed for providing a secure campus network in TCE.

Various other IT services and application portals supported by the Data center are

- Student Admission (Automation of Student Admissions)
- Student Attendance (Student Attendance Monitory System)
- TCE Asset Management System (Asset Tracking System)
- TCE Inventory Control (TCE Stock Maintenance System)
- TCE Exam Process Automation (Automation of Examination Process)

- Mobile Video Lecture Streaming (Stream Lectures viewable in mobile phones)

- Maintenance portal (facilities and request tracking management)
- Faculty profile updation (Automation of Faculty Achievements Updation System)

These were introduced to automate the offline processes and to cater the academic and administrative processes. Biometric based Staff Attendance monitoring system has been implemented. Help desk is provided to ensure the technology support to the stakeholders using the IT facilities.

The gapps services in the hosted environment provide email service to faculty, staff and students. Over 1700+ desktops were deployed in the computer labs and connected with the external ISP backbones. The Data center hosts infrastructure to over Rs.3.0 Crore. The data center also host 24/7 cooling system with 250 kVA Generator with auto mode support, 30kVA UPS and a camera surveillance system.

File Description	Document
link for additional information	[View Document]()

4.3.2 Student - Computer ratio

Response: 2.66

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)
?50 MBPS

35 MBPS - 50 MBPS

20 MBPS - 35 MBPS

5 MBPS - 20 MBPS

Response: ?50 MBPS

File Description	Document
Any additional information	[View Document]()

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	[View Document]()
Link to photographs	[View Document]()

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 21.84

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
344.555	322.109	302.751	299.749	319.318

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	[View Document](#)

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

Response:

Electrical/Electronic Maintenance

- This section takes care of Installation of new electrical appliances, electrical maintenance of about 1000kVA, power consumption and energy monitoring, generator maintenance, energy conservation, liasoning with TANGEDCO and Electrical Inspectorate and Solar power maintenance.
- Procurement and installation of Audio, video communication equipment and computer network components, Uninterrupted Power supply and Air conditioner systems
- Service/ maintenance of equipment for rectification of faults by trained technicians after obtaining permission from registrar/ principal/ chairman depending on quantum of expenditure required
- Receiving complaints through TCENET Maintenance portal, through class committee reports and letters and tracked for its closure.

Estate Maintenance

- Any building related request like building construction, modification/maintenance is passed to estate officer and is carried out with the budget approval from registrar/ principal/ chairman depending on the quantum of expenditure required.
- The classrooms, laboratory ambience, gardens, washrooms and student support facilities are maintained on day to day basis by third party contract and by college.

Transport Maintenance

- College supports commutation of college community by plying 4 cars, 8 buses and an Ambulance.
- Driver duty itenary and transport scheduling is carried out by Transport officer.
- Transport fitness certification, maintenance and augmentation of vehicles are done on yearly basis.

Library Maintenance

- Library day to day activities are governed by the Librarian and Assistants. The overall monitoring of the Library is governed by a committee consisting of Principal, Dean, Associate Dean and Department Level Coordinators and Librarian.
- Library committee scrutinizes the recommendation for the purchase of books and journals based on Goods of Committee norms.
- Library software will be reviewed by the committee, and upgraded
- Library follows the Government norms for weed out of worn out books, and stock verification of the books is done yearly.
- User awareness program on library resources are conducted periodically.
- Periodic feedback of the users is collected through Google survey.
- Library is maintained as per 5S quality norms and is monitored by 5S coordinators. Every day morning the return books will be re-shelved by the library assistants.

Laboratory Maintenance

- The Laboratory in charge of respective laboratory is responsible for the Calibration of equipment and is reviewed yearly basis.
- The Laboratory day to day electrical supply and electronics equipment is maintained by TCENET maintenance portal or by request letter through proper channel.
- All Laboratory is maintained as per 5S quality norms and is monitored by Department 5S coordinators.
- The obsolete equipment are condemned as per Government norms. The equipment stock in the laboratory are labeled by barcode and college assert register is maintained and audited.
- Laboratory ambience is done by third party estate maintenance contract and monitored by estate officer and the concerned laboratory technician.

Computer System Maintenance

- The servers and desktop systems are checked once in a week for release of new updates and upgraded accordingly.
- The firmware upgradation for network equipment like access points, switches are done on need basis.

File Description	Document
link for additional information	[View Document]()

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 58.23

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2348	2382	2485	2669	2578

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	[View Document](#)
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	[View Document](#)

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 3.4

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
159	118	136	193	121

File Description	Document
Any additional information	[View Document](#)

5.1.3 Number of capability enhancement and development schemes –

    1.Guidance for competitive examinations

    2.Career Counselling

      3. **Soft skill development**
      4. **Remedial coaching**
      5. **Language lab**
      6. **Bridge courses**
      7. **Yoga and Meditation**
      8. **Personal Counselling**

7 or more of the above

Any 6 of the above

Any 5 of the above

Any 4 of the above

Response: 7 or more of the above

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

5.1.4 Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 20.53

5.1.4.1 Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
862	1434	639	796	676

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

Response: 23.3

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
534	1387	453	2082	474

File Description	Document
Details of of students benefited by Vocational Education and Training (VET)	[View Document](#)
Any additional information	[View Document](#)

5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

Response: Yes

File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	[View Document](#)
Details of student grievances including sexual harassment and ragging cases	[View Document](#)

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 52.92

5.2.1.1 Number of outgoing students placed year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
589	652	728	684	545

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 2.2

5.2.2.1 Number of outgoing students progressing to higher education

Response: 27

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 6.41

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4	17	7	5	0

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
149	105	84	103	133

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) during the last five years

Response: 8

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	4	0	0

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

Students Council:

- All the class representatives, Dept. Association Secretaries , Club Coordinators, Sports & Games Secretaries & House Captains, Men & Women Hostels Representatives, Cultural Association Coordinators, Fine Arts coordinators, NCC & NSS Coordinators, Career Guidance Cell coordinators are the members.
- Two meetings will be conducted in a semester.
- Student members share their ideas / suggestions for overall improvement of Curricular, Co-curricular and extra curricula activities of the college.

- Principal will high light the developments of the college and students support activities.
- All the meeting minutes prepared and action take report presented in the next meeting.

Academic Council:

- Two meritorious student members are nominated in rotation across all branches / degree programmes once in a year.
- Two meetings will be conducted in a year.
- Student's suggestions / opinion about the curriculum revision, Content Delivery, Assessment and amendments in regulations are considered.

Class Committee:

Every class shall have a class committee consisting of two faculty members who are teaching in

that class, student representatives (cross section of students) and a chairperson who is a faculty

not handling the course for the class. The overall goal of the Class Committee is to improve the

teaching-learning process. The functions of the class committee include:

- Resolving difficulties experienced by students in the classroom and in the laboratories.
- Clarifying the rules and regulations of the degree programme
- Informing the academic schedule including the dates of assessments and the syllabus coverage for each assessment.

At least 6 student representatives of boys and girls shall be included in the class committee.

The class committee shall meet three times in a semester:

- The first meeting within 10 days from the date of commencement of the semester.
- The second meeting a week after the first test results.
- The third meeting before the last lecture day of the semester.

In each meeting, the action taken report of the previous meeting is to be presented by the Chairperson of the class committee.

Women Development Cell:

Two Girl Student Nominee: One Day scholar & one Hosteller

- Conducts Women empowerment /health awareness /First aid training /Gender equity awareness programmes;
- Contest/Quiz/ Workshop for the Faculty & Students;
- Conducts skill courses like Confident building/Time management/Life balance/ Work Culture/Ethical practice/Knowing legal rights/Kids care;
- Resolve the grievances of Women faculty & Girl students;
- Curbs the violence against women, sexual harassment at work ;

Counseling Cell:

 Two Day scholars - Boy & Girl and Two Hostellers - Boy & Girl are members

The cell will counsel the students once in a month in tutorial groups about the problems of adolescents and also will guide them in academic progress and career goals.

The cell will meet immediately if there is an urgent matter relating to adolescents and redress the problem thro internal staff counselors or thro external expert counselors. Also conducts programmes on Art & Science of Learning, Human Values and Well being to all the students.

File Description	Document
Any additional information	[View Document](#)

5.3.3 Average number of sports and cultural activities / competitions organised at the institution level per year

Response: 25.6

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
22	30	32	24	20

File Description	Document
Number of sports and cultural activities / competitions organised per year	[View Document](#)

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

TCE Alumni Association to coordinate and support the alumni activities to promote Institution's academic, soft skill of the student, industry interface, placement/internship, research, and outreach programs to facilitate communication with alumni and to strengthen alumni bonds of fellowship, professional association, and institutional affiliation.

- To encourage alumni to stay connected and to Leverage the resources, talents, and initiatives of alumni to advise, guide, advocate the Institution in achieving the respective department's missions and goals.
- To inculcate the culture of philanthropy among the alumni body, to ensure that the alumni continue to contribute their time, talent and financial resources to the betterment of the Institution.

TCE Alumni Association is functioning at the Institute and through its chapters spread across the country and abroad.

- Alumni Scholarships
- Reunions
- Personality Development Camps, Mentorship Programs
- Academic and Industrial Interaction by Alumni

Alumni Scholarships

TCEAA provides financial support to such needy students based on a merit cum means basis. The donations received from the alumni are deposited as corpus fund in TCE Alumni Charitable Trust and the interest earned from that is used for student scholarships. Donations are exempted under Section 80G of the Income Tax Act.

Reunion

Reunion brings in new opportunities for students as many alumni are entrepreneurs. This paves way for student recruitment and thus adds to college placement results. Other alumni also play their role as Mentors, where they provide financial and other support for students in need.

Generally, Alumni reunion is scheduled as

Silver Jubilee Reunions – conducted during December /July.

Golden Jubilee Reunions –conducted during July/ December

Other reunions – facilitated many reunions like 10th year, 16th year,20th year, 33rd Year, 40th Year and 45th Year reunions

Every reunion has a student questionnaire session at the end where the students have interaction with alumni regarding their association with the College and also about the trending technology.

Personality Development camps

Every year, three-day residential personality development camps are organized to impart soft skills, yoga practice, teamwork, emotional intelligence, and health awareness to the young engineering students. Five personality development camp was organized in one academic year in the name of Pinnacle, Orchid, Blossom, Efflorescence, Zenith.

Mentorship Programs:

Alumni Connect - Leadership in Action Club A Mentoring Programme

Objectives:

- Prepare the next generation leaders & entrepreneurs
- Provide motivation and mentorship to guide in career path options
- Create a support system which can be used beyond college days for career development, work-life integration, etc.

Benefits:

- Develop and hone leadership skills in potentials.
- Getting mentoring and exposure from Industry experts
- Establish a sustainable framework between College, Alumni & Students

Academic and Industrial Interaction by Alumni

- Member in Board of Studies
- Member in Academic Council
- Resource person for One credit/Two credit courses
- Guest Lectures
- In-plant Training/Internships /Placements
- Lab Development/Training

File Description	Document
Link for Additional Information	[View Document](#)

5.4.2 Alumni contribution during the last five years(INR in Lakhs)
? 15 Lakhs

10Lakhs - 15 Lakhs

5 Lakhs - 10 Lakhs

2 Lakhs - 5 Lakhs

Response: ? 15 Lakhs

File Description	Document
Alumni association audited statements	[View Document](#)

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 19

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3	10	2	2	2

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	[View Document](#)

Criterion 6 - 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

Response:

The Statements of Vision and Mission of TCE are over 50 years old and hence it was important to revisit the same during the year 2014 with the help of field experts. Prof.Rishikesh T Krishan, Professor Strategy at IIM Bangalore and current Director, IIM Indore wherein views of multiple stakeholders were solicited. Further, this is supplemented by detailed focused workshops with faculty groups to understand their concerns, aspirations and directions for growth and development of TCE.

Prof. Saji Gopinath, Professor and his team from Indian Institute of Management, Kozhikode facilitated two workshops and were organised for faculty members to form the Vision statement of TCE. The faculty were asked to rate TCE on 14 parameters identified from literature as qualities of a world class institution in a 5 point scale, after explaining each of the parameters.

Initially the facilitators explained about the meaning of Vision and Mission Statements. Then discussion focused on preferred modifications in the current 'Vision and Mission statements' of TCE.

The current vision statement is*'Quality Education at affordable cost'*

The following suggestions were made to modify the Vision statement

1. The term 'technical education' can be indicated in vision statement

2. Quality is a relative and subjective term and hence need to modified if possible (something like 'World Class Quality')

3. To whom are we serving can be indicated more clearly(affordable to all capable and qualified students regardless of their economic status)

4. Research orientation can be indicated in the vision statement itself (through terms like 'technology trend setter')

The following suggestions were made to modify the Mission Statement

1. Focus on research should be included. Academic and research excellence should be highlighted

2. Focus on developing entrepreneurial mindset among students

3. "Leader of leaders' line in the current statement needs to be removed

4. 'Ethical standards' and 'Human Values' can be combined

5. Overlap between 'Outstanding professional' and 'responsible citizen' need to be corrected

6. 'Contribution to industry' should be highlighted

7. 'Use of state of art technology to facilitate learning' should be highlighted

Based on the above, the Vision of TCE is recommended and mission statements are defined.

File Description	Document
Any additional information	[View Document](#)

6.1.2 The institution practices decentralization and participative management

Response:

The Organizational structure includes Registrar, Controller of Examinations, Deans, Associate Deans, HoDs, College level and Department level coordinators under the leadership of Principal for the effective functioning of the Institute. The various senior level administrative positions of the Institute are:

- Dean Planning and Development
- Dean Academics
- Dean Research and Development
- Dean Industry Institute Interaction
- Dean Students
- Dean Extra-curricular activities
- Registrar
- Controller of Examinations

Case study: Dean Students looks after the development of students in all aspects like career guidance, student grievances, counseling, and anti-ragging, as shown in the website https://www.tce.edu/student.

The Principal and Deans along with HoDs, based on their own experience in academic and research activities, convert them into tangible actions in respect of teaching learning process, research and development, and industry institute interaction. The action points are executed by Nodal Coordinators and their team consisting of faculty members from all the departments. Over a period, the sporadic discussions have given way for periodic discussions at Standing Committee level. The departmental action points in respect of teaching learning process, research and development, industry institute interaction are focused towards meeting the expectation of faculty, students, industry, society and alumni. The decentralization process facilitates the grooming of future organizational leaders.

The activities pertaining to the College in respect of teaching & learning, research and development, industry interface and student activities are reviewed by the Governing Council which is the apex body of the College. The academic activities are initiated by the department faculty in consultation with the present and past students and industries. Subsequently, it is scrutinized by the Board of Studies and then presented in the standing committee for approval in Academic Council and Governing Council. Any grievance in

academic activities could be represented to the Appeals and Grievances Committee. Grievances in any of the domains could be represented with Governing Council. The Principal discusses the outcomes of Governing Council meetings with the HODs and Deans to evolve a consensus on the focus areas of teaching learning process and research and development.

File Description	Document
Link for Additional Information	[View Document](#)

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

Strategic Planning Process

- The Chairman of the Governing Council along with the Principal, Deans and Heads of Departments in consultation with eminent educational administrators and College Governing Council members including Dr.R.Natarajan (former Chairman, AICTE) , Dr.R.Subbayyan (former Vice Chancellor, Bharathiyar University), and Dr.D.K.Subramanian (former Professor, IISc, Bangalore), Dr. Surendra Pal, (Former Asso. Director ISRO, Bangalore), took a decision to evolve strategies for the development of student, staff, infrastructure and for the interface with alumni, industries and society.
- Dr.Rishikesha T.Krishnan was co-opted as a consultant and he had interfaced with students, teacher, staff, alumni and industries. Based on the inputs of Dr.R.Natarajan, Dr.Saji Gopinath of IIM Kozhikode was also requested to support us in the strategic planning. The interactions are being continued.
- The core competencies, strategic challenges and strategic advantages are determined primarily through the interaction with faculty members through Department meetings / consultant meet cross section of faculty and students.
- The students through informal meetings with Principal and their graduate exit survey alumni, industry personnel, suppliers and collaborators through technical discussions online survey.

Strategic Considerations

- Understanding the current status from faculty, Staff, Students, Alumni, Employers of the college through SWOT & feedback surveys
- Analyzing the outcome of the SWOT and Surveys with respect to vision &mission of the college and key attributes for growth specified by NBA, NPIU, NAAC, NIRF and other assessment agencies
- Identifying action items and evolving action plan
- Declaring the strategy and action plan to stakeholders – Teachers and Students
- Monitoring the activities and reviewing at every stage with provision for mid-course correction leading to successful implementation of strategies
- Resolved to have strategies for the core area namely Teaching and Learning Process and for the sub-

areas namely Research and Development, Industry Interface, Students, Alumni, governance so as to move towards the shared vision of the college

File Description	Document
Strategic Plan and deployment documents on the website	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

Governing Council:

The functions of Governing Council are to approve the academic, financial and administrative policies of the institution, to appoint faculty members and staff, to review the annual report & the audited accounts and budget estimates.

Roles and Responsibilities of Dean

Deans are appointed in the functional areas of Academic Process, Research and Development, Industry Institute Interaction, Planning and Development, Students – Co-Curricular and Extra Curricular Activities. Deans will evolve Benchmarks, set Goals and review the progress of each of the activities pertaining to the sub-areas in the departments. Deans will be assisted by a team of Associate Deans and College Level Coordinators in the planning, reviewing and data analytics process.

Roles and Responsibilities of HoDs

- Implement and monitor day-today activities of the department

- support the Deans in evolving benchmarks and processes in the respective areas

- prepare a road map for the department and propose a financial budget

- assign responsibilities to the teachers and supporting staff

- ensure proper appraisals and evaluation of the faculty and staff.

Faculty Recruitment

Faculty recruitment is as per the norms of AICTE and state Government. For every selection, a staff selection committee is constituted with two subject experts recommended by AICTE, Nominee of State Government, Director of Technical Education and Anna University. Promotions of faculty and staff members are through the selection process.

Appeals and Grievances Committee

The students can make representations in respect of grievances related to Academic matters through the concerned Tutor, HoD and Principal. When students are not satisfied with the outcome of their representations, they can make representations to the Appeals & Grievances Committee.

File Description	Document
Link to Organogram of the Institution webpage	[View Document](#)

6.2.3 Implementation of e-governance in areas of operation

    1.**Planning and Development**
    2.**Administration**
    3.**Finance and Accounts**
    4.**Student Admission and Support**
    5.**Examination**

All 5 of the above

Any 4 of the above

Any 3 of the above

Any 2 of the above

Response: All 5 of the above

File Description	Document
Screen shots of user interfaces	[View Document](#)
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	[View Document](#)

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

Academic Council - To Scrutinize and approve the regulations, curriculum and syllabus of various courses, Content Delivery methodologies, assessment process.

Standing Committee - To monitor and recommend the academic administrative and financial matters of

the college to the appropriate bodies

Board of Studies - To review the curriculum and syllabus of various courses, teaching & learning methodologies and assessment pattern.

Department Advisory Committee - To provide direction and review the dept. on Innovative Practices in respect of Infrastructure, TLP, III, R&D, FDP and student activities.

Finance Committee - To consider and approve budget for the departments and college.

Planning and Monitoring Board - To provide benchmarks, to propose roadmaps and to monitor the institutional development activities

Malpractice Enquiry Committee - To handle the disciplinary issues

Building committee - To scrutinize and approve the design estimates, cost of building and other capital works, minor works, repair and maintenance

File Description	Document
Any additional information	[View Document](#)
Link for Additional Information	[View Document](#)

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

- With the support of IIT Bombay, IIT Kharagpur and IIT Madras domain specific faculty development programmes are conducted as part of Remote Centre programmes, QEEE programmes and spoken tutorial programmes
- New recruited faculty are given a short course on Research Methodology by a retired IISc Professor Dr.D.K.Subramanian.
- Corporate training is provided by TCS on leadership and CII on Educational excellence.
- Cross functional team is developed by encouraging all faculty members to participate in faculty development programmes, workshops, seminars and conferences to improve their technical expertise.
- Rotation policy is maintained for carrying out the administrative responsibilities of the Department so as to train and allow faculty to practice and learn the overall admin processes.
- Faculty, who have less than 5 years experience, are given training in teaching methodologies and pedagogy training.

6.3.2 Average percentage of teachers provided with financial support to attend conferences /

workshops and towards membership fee of professional bodies during the last five years

Response: 54.16

6.3.2.1 Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
106	165	92	128	235

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc during the last five years	[View Document](#)

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 38.8

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
17	74	39	35	29

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	[View Document](#)

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 71.69

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
106	209	232	180	235

File Description	Document
Details of teachers attending professional development programs during the last five years	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

- The Institute is committed to attract, encourage and retain qualified faculty/staff members to support the mission of academic excellence in education and research.
- The career advancement schemes are in place ensuring an effective career progression at various levels.
- An Assistant Professor with 5 years of experience, possessing Ph.D. degree and contributing in teaching-learning process, sponsored research and industrial consultancy, student activities and administration are promoted Associate Professor as per norms. The process for elevation to Professorship from Associate Professor also demands similar credentials.
- Faculty are rewarded with 3 increments in Basic Pay, on completion of Doctoral degree programme.
- College level co-ordinators/Nodal Officers are assigned College level administrative works in the respective domains. They in turn have faculty members from various departments for assistance. This process of elevating faculty members as co-ordinators/nodal officers has provided the administration many second inline leaders facilitating succession planning.
- The Institute has designed a Performance Appraisal System for the career development of faculty. Based on appraisals, Self-appraisal of the faculty is scrutinized by a team headed by Dean – Academic process. Based on the outcome, faculty who has performed well in the academic process, Research and Development, Industrial consultancy and student co-curricular and extracurricular activities are recognized in faculty achievement award function.

File Description	Document
Any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Financial planning is carried out annually by the Principal and Registrar considering the budget proposals

submitted by the respective authorities in the College and the income & expenditure during the last financial year. The prepared budget proposal is placed before the Governing Council for approval. Financial activities are carried out by accounts manager under the guidance of Registrar. This process is scrutinized by the management auditors and government auditors (Local Fund and Account General). Internal financial auditor has freedom to suggest and revise the formats of relevance based on the feedback from the students and faculty, in consultation with Registrar.

Budget allocation is done for every academic year for each department under each head. Utilization is tracked periodically through internal and external finance audits. Further TEQIP supports the College to take new initiatives like infrastructure development, curriculum development, faculty development and industry interaction.

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

Response: 938.11

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
166.73	180.85	193.34	208.58	188.61

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	[View Document](#)

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

Response:

- Conducting Conferences / Seminar / Workshop after attending programmes from higher learning institutions like IITs, NITs, and from professional societies and industries.
- TCE offers QEEE programmes of IIT Bombay for students. These courses are related to their Curriculum.
- TCE is an NBA nodal center and mentors neighbouring institutions for Outcome Based Education
- Consultancy and testing projects
- Research Projects
- Revenue generated from patents

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

- Since 2004, the Institute received ISO 9001 certification by TUV SUD South Asia. In the year 2015, the initiative had been taken for ISO 9001:2015 certification.
- The Institute participates in NIRF ranking for the years 2016, 2017 and 2018 and registered for NIRF 2019.
- The Institute regularly participates in magazine ranking like Career360, DataQuest, India Today, Outlook, The Week 2018 Survey and receives higher grade.
- The Institute continuously performs well to meet its quality objectives and received various quality awards

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

Academic support activities include tracking the student attendance, counseling the academically poor students, organizing workshops, seminars and guest lectures and the like. The quality objectives of each of these processes and its assurance are ensured internally within the Department by the HoD, Dean Academics and then by the Principal. Both academic and industry project works of the students are evaluated by a team comprising of Guide, Head of the Department and an external examiner. The external examiner from higher learning institution/industry is appointed by the Controller of Examinations of the College from the panel of the examiners suggested by the Head of the Department. The evaluation of these projects is done based on the rubrics, which are designed based on the Programme Outcomes suggested by NBA.

Each semester, the Controller of Examinations initiate the audit of question papers and the evaluated answer scripted by the external audit team, with the support from the Head of the Department.

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 0

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	[View Document](#)

6.5.4 Quality assurance initiatives of the institution include

1. **Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**
2. **Academic Administrative Audit (AAA) and initiation of follow up action**
3. **Participation in NIRF**
4. **ISO Certification**
5. **NBA or any other quality audit**

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	[View Document](#)
Details of Quality assurance initiatives of the institution	[View Document](#)

6.5.5 Incremental improvements made during the preceding five years *(in case of first cycle)* Post accreditation quality initiatives *(second and subsequent cycles)*

Response:

- Implementation of OBE and CBCS across all UG/PG programmes since 2014.
- Padmashri Award to Prof. R.Vasudevan for his innovative way of disposing of plastic waste and reusing it to build roads.
- TCE Faculty publications and citations have significant improvement in the recent 5 years
- Offering of Industry support 1Credit / 2 Credit courses to Students have been substantially increased among all departments in the emerging trends
- Extension of TCE-TVS curriculum to UG EEE programme after the successful implementation of the same to UG Mechanical programme

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 55

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
18	17	6	7	7

File Description	Document
List of gender equity promotion programs organized by the institution	[View Document](#)
Any additional information	[View Document](#)

7.1.2 Institution shows gender sensitivity in providing facilities such as
a) Safety and Security
b) Counselling
c) Common Room

Response:

- Separate hostel facility is provided for girl and boy students.
- Bus facilities are provided for girl students and the women faculty.
- Security personnels have been deployed in adequate number in the campus round the clock.
- In case of any health issues, ladies waiting rooms are available for students and faculty to take rest. Medical facilities are available in the campus to address the need of them.
- For every 20 students , there is a mentor who helps the students to realize their academic and personal goals. Mentor – students meeting happens periodically and discussions will take place regarding academics, finance , or health related issues.
- Anti ragging – Campaign and Compliance is taken care by a team of faculty members.
- Awards are given **separately** for boys and girls in the following categories every academic year.Outgoing Student Excellence, Best outgoing student, Best Outgoing NCC cadet, Best Outgoing NSS volunteer, Best Outgoing sports person, and Best Outgoing Fine Arts student.

Women Development cell (WDC)

- Women Development cell (WDC) at TCE strives hard for the women safety, development and for the uplift of women in Engineering and Society. It works for the benefit of women serving in TCE

as teaching faculty, women students and supporting staff.

- WDC at TCE is much interested in creating positive social norms in institution that value girls and their rights. It works for the well-being of women students and faculty that can achieve long-term and sustainable social changes. WDC of TCE regulates all the related activities through an experienced set of internal & external committee members.
- The committee members of WDC will meet once in a semester to review and monitor the functioning of women development cell in our college.The committee will discuss the contemporary issues faced by female students and employees with respect to violence, sexual harassment, gender inequality and any other complaints within the institution.

Work done/in progress in WDC

- Inclusive Events/workshops/seminars/contests/camps for all staff & students.
- Series of Expert lectures.
- Conduct awareness programmes on "Gender equity and Social Responsibilities".
- Women's day celebration.
- Get together once in a semester.
- Attending out house programmes.

File Description	Document
Link for Additional Information	[View Document](#)

7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 50.15

7.1.3.1 Annual power requirement met by renewable energy sources (in KWH)

Response: 652000

7.1.3.2 Total annual power requirement (in KWH)

Response: 1300000

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	[View Document](#)
Any additional information	[View Document](#)

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 70

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 140000

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 200000

File Description	Document
Details of lighting power requirements met through LED bulbs	[View Document](#)
Any additional information	[View Document](#)

7.1.5 Waste Management steps including:
- **Solid waste management**
- **Liquid waste management**
- **E-waste management**

Response:

Solid Waste Management:

Solid waste management Centre at Department of Chemistry, TCE is carrying out research work on management to cater the needs of the society, industries and to the college.

Waste Management Techniques: Techniques Available in our Centre

Solid Waste:

Management Techniques:

- Biodegradable Waste
  - Converted in to manure by decomposition – new method for fast decomposition
  - Bio gas conversion
- Non biodegradable Waste- Plastics
  - Plastic Tar Road
  - PLASTONE blocks
  - Roofing Sheets
  - Plastics to fuel oil

Plastic waste Management Techniques:-

- Collection of waste plastics and disposal
- Shredding of waste plastics in to required size of 2mm to 4mm
- Preparation of plastic coated aggregate
- Mixing of bitumen and the stone

- Laying of plastic tar road

Consultancy: -

- Laying of plastic roads
- Waste management systems in industries

Work on Plastic Waste Management:

A major work on the plastic waste is being carried out in the college by Dr. R. Vasudevan and his team from Dept. of. Chemistry. A newer method has been developed by coating waste plastics over hot stone aggregate and uses the same for road construction. Here the consumption of waste plastics is high (10 % to 15 %). This method is patented in 2002 by Dr. R. Vasudevan. This technology was also coded by the Indian Road Congress in 2013(IRC-SP-98-2013). Using this technology more than 50, 000 Kms of road has been laid in India. Plastone blocks can be used as road side paver block. In India almost 11 states had implemented this technology. The government is using the PMGSY scheme found for laying plastic roads on rural road sector.

The Government of India had awarded the 4th highest civilian award "Padmasri" to Dr. R. Vasudevan on 20th March 2018.

Liquid Waste Management

Liquid Waste:

- Waste water from kitchen
- Waste water from industries
- Reject waste water from RO plants
- Distilleries waste

Management Techniques:

- Analysis of composition of waste water
- Removal of heavy metals and other hazardous impurities (R & D)
- Reuse of waste water in gardening and washing

- Sewage treatment plant
- Individual houses
- Portable KIT to test as well as purify the waste water

Two Sewage Treatment plants with Effluent Treatment with the capacity of 7000 litres/day were established in the Campus. The total amount of Rs. 1,02,85,958 has been spent on Sewage treatment plants so far.

E – Waste Management:

A major work on using e waste plastics is being done in our college and a solution for disposal of the e-waste plastics is being found out. Powdered e-waste plastics is used prepare modified bitumen by

mixing them with 60/70 bitumen at different proportion.

E- Waste:

- E waste plastics
- E waste metals and other components
- Recovery of the above waste from electrical and electronic products waste

Management Techniques:

- Use of e waste plastics in modification of bitumen used in road laying
- In PLASTONE preparation as a filler

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

To make the college self-sufficient in water resources not only for domestic application but also for improving the green belt particularly lawn and garden an innovative, scientific system of Rain Water Harvesting was installed in the college premises. Total areal extent of the engineering college is 139.70 acres, which is equivalent to 565381 sq.m. The vacant area constitute around 538770 sq. m.

The roof area of buildings comprising various academic departments, Ladies and Gents hostel , guest house library and canteen are covered by red coloured sandy soil. The soil is compact at a few locations and mixed with silty sand. The mean maximum temperature ranges from 29.2 C to 41.8 C and the mean minimum temperature varies between 13 C to 24 C. The average annual rainfall in and around area is 867 mm as per the meteorological record. The rainfall pattern is uncertain and unequally distributed. The campus receives 50 % of the rainfall during Northeast Monsoon.

The campus located in a sloppy terrain and the western side of the campus near canteen three mini rain water storage structures were constructed in a rocky strata. All the water near the rocky mound are collected and through lined drains and directed into this structures. The land use pattern of the engineering college campus is of built up areas and open grounds consisting of green belts and several avenue trees. The blocks are well connected by neatly laid roads with a network of lined storm water drains. Major portion of the roof water from buildings and surface water generated from the open areas and roads follow the natural gradient and subsequently flows through main canal of eastern side.

Lined storm water drains have been developed on the northern and eastern sides of the premises and adjacent sides of the roads. The storm water drains carries huge quantity of runoff water during monsoon.The rainwater harvesting system consists of filter tank of size 2m dia and 2m depth , collection chamber of size 1m dia and 1m depth and recharge well of size 3m dia and 5m depthat appropriate places.

Based on average annual rainfall of 867 mm , the annual roof water and surface water generated from the terraces of buildings and open areas is 18457 KL and 2,80,260 KL, respectively. The harvested rain water is utilized for recharging the open well and bore wells by artificial recharge structure. The runoff water

generates from the campus during monsoon is diverted to aquifer system . This rain water system overcomes the ill effects of inadequate natural recharge and over exploitation of water due to increasing demand it also targets the gradual improvement in the quality of water by implementing artificial recharge structure In addition to the   tangible benefits ,it also inculcate awareness to the student community who happen to be budding engineers and   entrepreneurs of our country.

File Description	Document
Any additional information	[View Document](#)

7.1.7 Green Practices
- **Students, staff using**
  a) **Bicycles**
  b) **Public Transport**
  c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

- The College has green environment due to its strict governance on protecting trees in the campus.
- Cutting of trees is strictly prohibited. Most of the buildings are constructed without demolishing trees in the campus. Thus the campus holds more than 75 % of green cover. Certain department such as Architecture, the students celebrates their batch day by planting trees.
- All the plant species in the campus have name boards high lighting the medicinal / herbal significance.
- The College has higher number of peacock visits from Thiruparankundram region. Hurting snakes, monkeys, peacocks and other birds are strictly prohibited. Special hoardings were erected at many places indicating their religious values.
- The College with due technical inputs and assistance from workforce has initiated following energy conservation measures to ensure cost control: Periodic energy auditing, Generation and utilization of bio-gas in hostels, Solar stills for hot water usage in hostel, Deployment of Plastic tar roads and Energy conserving lighting systems.
- As one of the green practices, 450 KW Solar power plant has been installed in the roof tops of various buildings.
- Organic waste is collected from different parts of the campus and manure is prepared for the plants using vermi -compost techniques (preparing manure through earth worms).
- Recycling of plastics is one of the key factors in protecting the environment. The College collects Plastic waste from different parts of the city for laying plastic roads in the campus. Most segments of the roads and central parking area were laid from plastic wastes. Patent is also obtained by the College in plastic bitumen road technology.
- Recycling waste water (grey water) from the canteen and other cooking areas in the campus is used for watering plants. Drip irrigation is practiced for teak plantation in the campus.
- Rain water harvesting is practiced in the campus and a storage tank of capacity two lakh litres (50 thousand gallons) is stored annually

- Educating the students about the green atmosphere, plastic waste and garbage culture is handled in NSS and NCC programmes. Awareness lectures on environmental perspectives in Vedas and Bhagavat Gita were handled daily in the College premises. The lecture usually happens under a banyan tree.
- TCE maintains the list of automated softwares for easy administration and governance and to reduce the usage of papers.

Components	Purpose	
TCE Admissions Automation Systems	UG/PG student admission into the programmes	
CAMU	Teaching Learning activities: course plan, attendance, marks counselling, learning materials, feedback	
Maintenance	Grievance redressal system: Intranet, internet, hostel, houseke	
TAMS: TCE Attendance Monitoring System	Automatic management of attendance and timesheets for College through entries from biometric fingerprint machines	
TEAM: TCE Asset Management System	Complete list of facilities in all laboratories are maintained	
TEA: TCE Examination Automation	Details related to all examination and result publishing proces	
TIC: T ....Control System	System for control on the usage of stationeries	
Library	- AutoLib: Automated operations and maintenance of li - Digital Library: Online free access to technical journal ASME, ASCE, McGraw Hill eBooks, Science Direct.	

File Description	Document
Any additional information	[View Document](#)

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 2.33

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
97.17	89.67	47.35	1.29	0.19

File Description	Document
Details of expenditure on green initiatives and waste management during the last five years	[View Document](#)
Any additional information	[View Document](#)

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

    1. Physical facilities
    2. Provision for lift
    3. Ramp / Rails
    4. Braille Software/facilities
    5. Rest Rooms
    6. Scribes for examination
    7. Special skill development for differently abled students
    8. Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: C. At least 4 of the above

File Description	Document
Resources available in the institution for Divyangjan	[View Document](#)
Any additional information	[View Document](#)

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 17

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
5	3	3	4	2

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	
Any additional information	

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 77

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
8	10	17	20	22

File Description	Document
Report of the event	

**7.1.12
Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff**

Response: Yes

File Description	Document
Any additional information	
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Provide URL of website that displays core values	

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about

national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	[View Document](#)
Any additional information	[View Document](#)

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Any additional information	[View Document](#)

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Any additional information	[View Document](#)

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 69

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
14	13	14	14	14

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

The Institution regularly celebrates national festivals and organizes events on the birth and death anniversaries of great personalities. The following are the events conducted regularly:

* Teacher's Day celebrations

* Gandhiji's Birthday

* Martyrs' Day

* Engineer's Day

* Vivekandha's Birthday

* Bharathiyar's Birthday

* College Celebrates its Founder's Day on 29th July every year. On that day scholarship from Alumni Charitable trust is distributed to students who are academically sound and economically weak. Around 150 students from all disciplines are being benefitted every year.

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:
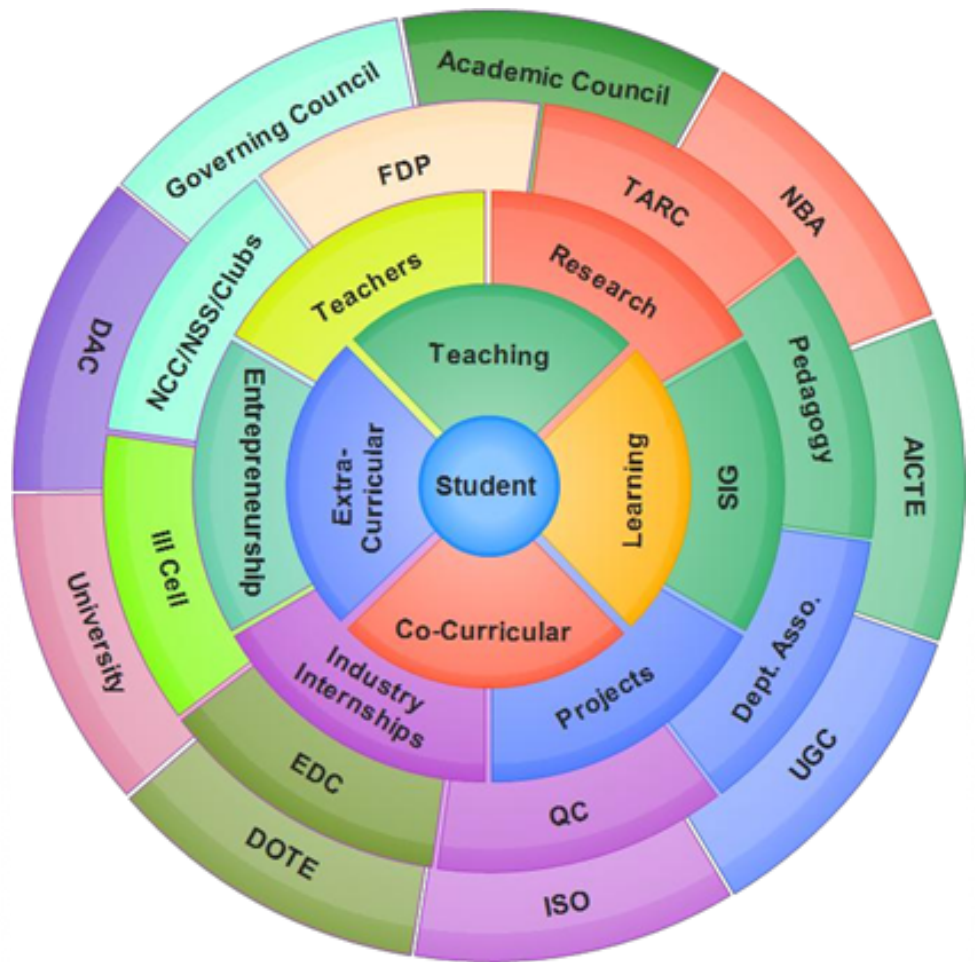
Academic, Financial Functions:

The College operates under the statutory and regulatory requirements of AICTE, NBA, UGC, Anna University and Directorate of Technical Education (DoTE).The State Government?s policies like student admission, faculty/staff recruitment, building stability, fire safety, rain water harvesting, non-usage of plastics, waster water recycling have been implemented by the College. Account General Audit (AGA) and Local Fund (LFA) Audits are as per the grant in aid code. The College is administered by its Governing Council.

The Governing Council has member composition of eminent academicians, industry experts, nominees from AICTE, state Government, UGC and affiliated institutions. In order to achieve a sustainable progress, the College activities are sub divided into Planning and Administration, Teaching and Learning, Research & Development, Industry Interface and student activities and each of the domains is managed by a Dean who in turn interacts with heads of Departments.

Budget allocation is done for every academic year for each department under each head. Utilization is tracked periodically through internal and external finance audits.

Administrative Functions:

The College has decentralized administrative structure with Chairman, Principal, Deans, Registrar and Heads of the Departments, Co-coordinators, Faculty, support staff and Students. The administrative mechanism of the college is functionally grouped under Planning and Administration, teaching and learning, Research and development, Co-curricular and Extra Curricular activities. Institutional works related to each area is carried out by the respective coordinators of the departments with the guidance from the Head of the department. They are being coordinated at the College level by the Deans of the respective domains supported by coordinators nominated from the departments. The interaction between Deans and Heads of the department facilitates quality and sustainability. Reviews are conducted at the department level (weekly), institute level (monthly) and Management level (half yearly) on the performance on performances of processes through periodic internal/external ISO audits and MRMs.

College Management System

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

1) TCE- TVS Co-created Curriculum:

TCE, Madurai and TVS Motors (TVSM) Company, Hosur are jointly desirous of developing an industry supported curriculum for UG Mechanical Engineering programme and UG Electrical and Electronic Engineering and offer the same to the deserving students.

Design:

- The Curriculum was developed jointly with TVSM Subject Matter Experts (SME) so as to make the role ready engineers. The course designers from the members of Special Interest Group (SIG)] of TCE and Subject matter experts of TVSM will be formulating the syllabus together. The experts

from TVSM will be participating in the meeting of Board of studies for scrutinizing the syllabus to match with employability skills sought for. The Curriculum of every semester will be presented in Board of Studies and approved through Academic Council of the College. The Curriculum framed is extended to all the UG students of Mechanical Engineering programme.

- The Courses will have Course Objectives and are mapped with Programme Outcomes in order to ensure the level of competencies while they completing the course. The Project work is designed such a way that the selected students carry out their project in TVSM Company which will be reviewed thrice by Faculty of TCE and Subject Matter Experts (SMEs) in a semester.

Course development is done through Design Documents containing Programme Outcome versus Course Outcome mapping, Course Objectives and Enabling Objectives, Content and Methods to deliver the content, Inventories used for delivery, timelines for delivery, evaluation methods and question banks.

Course Map - Enclosed

Delivery:

Normally, the courses are handled by the faculty at TCE and the customized elective courses are taught by SMEs of TVSM or the identified subject experts from higher learning institutes/foreign institutions.

- Content delivery by SMEs for Programme Elective courses

- Spark Ignition Engines – Fundamentals, Design and Engineering

    - Mr.Roger D Stone, RDS Engineering UK

- Vehicle Design Engineering –Statics and Dynamics

    - Dr.Roberto Lot, University of Southampton

- System Approach for Engineers

    - Dr.Subramaniam, STIMS Institute USA

- Metal Cutting Process Engineering

    - Mr.K.Vijaykumar, IMTA, Bangalore

- Sheet Metal drawing and Bending

    - Mr.A.Mani, Karun Tooling, Bangalore

- Design for Welding

    - Dr.C.Ravichandran, Welding Research Institute, Trichy

- Internship at TVS Motors in the areas of Product development and management and Project management for the students
- Skill Training at GTTI, Coimbatore
- Technical Training at TVSM, Hosur
- Behavioural Training at TVSM, Hosur
- Project Training at TVSM, Hosur
- The Internship focuses on behavioral programs such on Time Management, Creativity, Communication, and Attitude. The Students also undergo Technical programs during vacation. The Expenses of Internship for the selected students will be completely borne by TVSM. Also the company sponsors expenses of TCE faculty accompanying students for Internship.
- Customized training for the courses like industrial metrology, vehicle design engineering, Testing and certification of automotive electrical and electronic systems by ARAI, Pune.
- Ten days course on "Spark Ignition engines" had been conducted by UK experts along with employees of industries
- Experiential learning in Laboratories:

     - Machine Shop, Workshop and Fitting shop laboratory exercises through live automobile parts with the learning on process planning and sequencing of operations.

Assessment:

- Students' performance analysis is done for continuous assessment test for each question in each course, followed by their improvement plan through counseling. Result analysis is done course-wise, semester-wise, batch-wise and student-student.
- Assessment of student competency in technical and behavioral skills for every semester during their internship and through Continuous Assessment Tests.
- Students are indulged to perform system level projects on Power Train Systems and also sub-systems of Power Train Systems design and manufacturing during their project period.
- Project evaluation is carried out by SMEs and TCE faculty members. Students interact and collaborate with managers of various Departments of TVSM. This enhances the employability skills to students.

2) Theme Areas and SIGs in Department

Every department has identified a theme area and Special Interest Groups. All the academic related and R&D works in the departments are focused towards its theme area and SIGs. The following are the list of Theme areas and SIGs of the departments of TCE.

Department	Theme Area	Special Interest Groups Name	
Civil	Eco Friendly structures	Structures – Steel and Concrete, Water Resources, Geotech Transportation, Construction Materials, Environmental Eng	
Mechanical	Automation	Machine Design, Quality, Thermal, Manufacturing, Suppl Vision	
EEE	Power Systems and Energy	Power Systems, Power Electronics and Drives, Contr	

		Computing, Energy Systems	
ECE	Wireless Technologies	RF Systems, Signal Processing, Image Processing, Networking, Remote Sensing and GIS, Embedded Systems	
CSE	Knowledge Engineering,	Free/Open Source Software, Multicore Architecture, Soft	
IT	Data and Business Analytics	Data Mining, Information Security, Distributed Sys Resource Planning, Cloud Computing, Computer Networks	
MCA			
Architecture	Heritage	Digital Architecture, Landscape, Climatology	
Mathematics	Modelling and Simulation		
Physics	Materials Science		
Chemistry	Green Chemistry		

File Description	Document
Link for Additional Information	[View Document](#)

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

Under the broad umbrella of Technology Vision 2020, Technology Information, Forecasting and Assessment Council (TIFAC) has launched an ambitious mission called REACH (Relevance and Excellence in achieving new heights in educational institutions). The foundation of the mission rests firmly on the triangle linkage between the academic institution, industry and government. Thiagarajar College of Engineering has been selected by TIFAC to set up a Centre of Excellence in **Wireless Technologies**.

Vision of TIFAC at TCE is to become world class training, research and product development centre in wireless technologies.

Objectives are three fold namely:

- To generate trained manpower in emerging Wireless Technologies.
- To train Engineers from industries and government organizations in the area of wireless system design and testing.
- To carryout collaborative research and product development in the allied areas of wireless technologies.

TIFAC CORE at Thiagarajar College of Engineering would strive to establish state of art infrastructure in wireless technologies.

Mission REACH (Relevance & Excellence in Achieving new heights in educational institutions) launched

by TIFAC aims to create a constellation of world class COREs- Centre of Relevance & Excellence - in diverse disciplines across the length and breadth of the country. The mission intends to create 80-100 such COREs, which together will emerge as a network across the country. Mandated to turn out top quality human resource in the area of targeted excellence, which shall be utmost, relevant to Indian industries & society.

TIFAC-CORE, an idea that is simple yet vastly powerful, each CORE will be the outcome of the funding, infrastructure, expertise, knowledge and commitment brought together by the user industry, educational institute and government. Every one of them a center of excellence, with the best of teachers, students and researchers, entrepreneurs and industries, this network of COREs will become a powerful and important resource to realize the dream of developed India by 2020. A resource that is soon to crystallize into a reality, as can be seen by the number of COREs that are already successfully functioning in various parts of the country.

First Phase of TIFAC CORE in Wireless Technologies has initiated the following:

- State of Art RF and Base Band Systems Laboratories
- CTIA Certified Anechoic Chamber Facility
- M.E Course in Wireless Technologies
- Man Power generation in Wireless Technologies
- Research tie up with DRDO, HTSL, Bangalore, Motorola, India, TVSICS, Madurai.

Second Phase of TIFAC CORE in Wireless Technologies would look into the following:

- Tie up with higher learning institutes in India and Abroad
- NABL Certification for Wireless Laboratories
- Value added facilities like external antenna test ranges, wireless protocol development centre etc.
- i – Labs will be established for wireless experiments
- New wireless product development and patenting

Work on Plastic Waste Management:

A major work on the plastic waste is being carried out in the college by Dr. R. Vasudevan and his team from Dept. of. Chemistry, Thiagarajar College of Engineering. A newer method has been developed by coating waste plastics over hot stone aggregate and uses the same for road construction. Here the consumption of waste plastics is high (10 % to 15 %). This method is patented in 2002 by Dr. R. Vasudevan. This technology was also coded by the Indian Road Congress in 2013(IRC-SP-98-2013). Using this technology more than 50, 000 Kms of road has been laid in India. The durability of the road is not less than 10 years. The performances of the roads laid were also studied under the guidance of Central Pollution Control Board, New Delhi. The roads constructed using this technology was well **appreciated both by the government and in the private sector**. In India almost 11 states had implemented this technology. The government is using the PMGSY scheme fund for laying plastic roads on rural road sector.**The Government of India had awarded the 4thhighest civilian award "Padmasri" to Dr. R. Vasudevan on 20thMarch 2018.**

File Description	Document
Link for Additional Information	View Document

5. CONCLUSION

Additional Information :

With an idea to create lively environment for interaction, intellectual discussions, continued learning, knowledge improvement of academics and the need for paradigm shift in attitude, Quality circle was introduced in TCE the month of June 2014. A group of enthusiastic faculty members were identified as facilitators. Brainstorming sessions to identify issues were conducted across all Departments by these facilitators which had decent response from the students. The problems were prioritized by the teams. Quality Circles were formed to address the problems related to Teaching Learning as key concerns.

More details are found in www.tce.edu/content/quality_circle

Concluding Remarks :

The College has "World Class Quality technical education with strong ethical values" as its vision, which is in tune with our Founder's philanthropic thought of "Work is Worship". The ethical value system envisioned by the Founder of the College is reflected in all the processes of distributing management seats to meritorious and economically deserving candidates from the society.

Over the years, the Institute has consciously improved the academic processes through the identified functional areas. This incremental improvement happened in the areas of teaching and learning, research and industry interface, Student activities and modernizing the administration through ERP systems. The faculty members have been nurtured continuously to chart out their career path with more emphasis on research and industrial interactions.

TCE has predominantly moved from teaching institution to research based learning in late 2000s, which results in more than 60% of our faculty possessing the doctoral degrees. This led to the establishment of Centers of Excellence and creation of knowledge through Publications and Patents. Now, it is focusing towards product development based education and entrepreneurship by establishing incubations inside the campus.

In the past two decades, the voluntary participation in accreditation process by NIRF ranking, NBA, AICTE-CII industrial survey and other magazine rankings annually. In addition the prestigious quality awards such as IMC Ramkrishna Bajaj, Rajiv Gandhi Natonal Quality Award have enabled the system to refine itself in the process.

TCE continue its Education journey continuously with improved Quality in all domains and chosen fields.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification
1.3.2	Number of value-added courses imparting transferable and life skills offered during the last five years 1.3.2.1. How many new value-added courses are added within the last 5 years Answer before DVV Verification : 93 Answer after DVV Verification: 80
2.1.1	Average percentage of students from other States and Countries during the last five years 2.1.1.1. Number of students from other states and countries year-wise during the last five years Answer before DVV Verification: 	2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
41	52	37	31	21 | Answer After DVV Verification : | 2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
10	15	6	9	21	
2.3.3	Ratio of students to mentor for academic and stress related issues 2.3.3.1. Number of mentors Answer before DVV Verification : 240 Answer after DVV Verification: 240
2.4.2	Average percentage of full time teachers with Ph.D. during the last five years 2.4.2.1. Number of full time teachers with Ph.D. year-wise during the last five years Answer before DVV Verification: 	2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
170	165	156	145	134 | Answer After DVV Verification : | 2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
169	165	156	145	134	 Remark : HEI input edited according to provided documents.
2.4.4	Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

2.4.4.1. Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
78	78	55	58	45

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
23	35	16	33	17

Remark : Awards for State/national/International level from GOVT recognized bodies will be considered.

3.1.3

Number of teachers awarded international fellowship for advanced studies/ research during the last five years

3.1.3.1. The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
6	3	7	4	3

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
1	0	0	1	1

Remark : Teachers awarded for advance study /research are only considered., Teacher's went for conference, collaboration purpose will not be considered here.

3.2.1

Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments,Chairs in the institution during the last five years (INR in Lakhs)

3.2.1.1. Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
310.28	422.62	80.18	773.29	1019.08

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
184.12	128.42	72.19	568.83	684.55

Remark : The grants for projects Under TEQUIP will not be counted here.

3.3.2	Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

3.3.2.1. Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
24	35	24	24	12

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
21	27	20	23	9

Remark : HEI input edited as per clarification response

3.3.3	Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

3.3.3.1. Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
26	72	29	31	17

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
24	59	22	27	16

Remark : Edited as per clarification response. Awards for innovations ONLY counted.

3.4.4	Number of Ph.D.s awarded per teacher during the last five years

3.4.4.1. How many Ph.Ds are awarded within last 5 years
Answer before DVV Verification : 183
Answer after DVV Verification: 196
3.4.4.2. Total number of teachers recognised as guides during the last 5 years

	Answer before DVV Verification : 112 Answer after DVV Verification: 112 Remark : HEI Clarification response	
3.7.2	Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years 3.7.2.1. Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years Answer before DVV Verification:	

2017-18	2016-17	2015-16	2014-15	2013-14
265	272	190	96	189

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
139	115	64	56	61

5.2.2	Percentage of student progression to higher education (previous graduating batch) 5.2.2.1. Number of outgoing students progressing to higher education Answer before DVV Verification : 30 Answer after DVV Verification: 27	
5.2.3	Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations) 5.2.3.1. Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years Answer before DVV Verification:	

2017-18	2016-17	2015-16	2014-15	2013-14
148	105	84	103	133

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
4	17	7	5	0

5.2.3.2. Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years
Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14

5.3.1	Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) during the last five years

5.3.1.1. Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
40	76	48	26	36

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	4	0	0

5.4.2	Alumni contribution during the last five years(INR in Lakhs) Answer before DVV Verification : ? 15 Lakhs Answer After DVV Verification: ? 15 Lakhs
6.5.3	Average number of quality initiatives by IQAC for promoting quality culture per year

6.5.3.1. Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
7	8	8	12	5

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

Remark : Quality Initiatives by IQAC for Academic quality improvement are expected.

7.1.9	Differently abled (Divyangjan) Friendliness Resources available in the institution: 1. Physical facilities 2. Provision for lift 3. Ramp / Rails 4. Braille Software/facilities 5. Rest Rooms

	6. Scribes for examination 7. Special skill development for differently abled students 8. Any other similar facility (Specify) Answer before DVV Verification : B. At least 6 of the above Answer After DVV Verification: C. At least 4 of the above
7.1.10	Number of Specific initiatives to address locational advantages and disadvantages during the last five years 7.1.10.1. Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years Answer before DVV Verification: 	2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
21	18	22	21	25 | Answer After DVV Verification : | 2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
5	3	3	4	2	
7.1.11	Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere) 7.1.11.1. Number of initiatives taken to engage with and contribute to local community year-wise during the last five years Answer before DVV Verification: 	2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
20	18	16	18	20 | Answer After DVV Verification : | 2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
8	10	17	20	22	
7.1.17	Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years 7.1.17.1. Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years Answer before DVV Verification: 	2017-18	2016-17	2015-16	2014-15	2013-14
---	---	---	---	---
65	62	60	65	60	

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
14	13	14	14	14

2.Extended Profile Deviations

Extended Profile Deviations
No Deviations