



THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI 625015

STUDENT SATISFACTION SURVEY
2018-19

STUDENT SATISFACTION SURVEY

As a part of continuous improvement in Teaching and Learning Process at Thiagarajar College of Engineering, the student satisfaction survey is conducted by the end of every academic year. The voice of the students on the effectiveness of teaching learning process is recorded through the survey. The questionnaire has been designed with specific focus on curriculum, content delivery, assessment and support system/infrastructure. A google form with the link <https://forms.gle/tF5dWwMtD1yYHtP48> has been created and is circulated among all the students. The feedback is collected in anonymous mode. **837 students** participated in the survey. The responses have been analysed and appropriate action plan is prepared by the academic process team members of the Institute to enhance the quality of Teaching Learning Process.

QUESTIONNAIRE FOR STUDENT SATISFACTION SURVEY

CURRICULUM

1. The curriculum is well balanced, updated periodically and satisfies the present needs.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
2. Exposure to industrial practices is provided through industry supported courses/ seminars/ guest lectures/ field visits/ student internships.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
3. The curriculum facilitates interdisciplinary learning through foundation electives and general electives.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
4. The curriculum has adequate number of practical courses / theory cum practical courses/ Project works for skill development.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
5. The Special Interest Groups (SIG) and programme electives have helped you in specialization of your area of interest.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
6. The implementation of the Choice Based Credit System (CBCS) has enabled you to enroll in the courses and slots you opted for.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
7. Adoption of Conceive, Design, Implement, Operate (CDIO) framework in TCE undergraduate curriculum has enriched the technical and professional skills.
 - *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

8. CDIO Skill based courses like Engineering Exploration, Lateral Thinking, Design Thinking, Project Management, System Thinking are facilitating participation in international contests / competitions

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

9. Audit courses like Environmental Sciences, Constitution of India, Professional Ethics etc., created social awareness

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

CONTENT DELIVERY

10. How much of the syllabus was covered in the class?

- *90 to 100%* ▪ *80 to 89%* ▪ *70 to 79%* ▪ *60 to 69%* ▪ *Less than 50%*

11. The instructors adopt active and collaborative learning strategies like Think Pair Share, Flipped Classroom, Problem Based Learning etc.,

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

12. The instructors use a variety of ICT Tools and Learning Management Systems like Moodle, Canvas, Google Classroom are effectively used for sharing of resource materials, conducting assignments, discussions and quizzes.

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

13. Instructors are readily available for clarification of doubts and for personal mentoring.

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

14. Laboratories are well equipped with appropriate hardware and software for the conduct of practical classes/project works.

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

15. The institute provides support for participation in online certification from NPTEL, Coursera, edX etc.,

- *Regularly* ▪ *Often* ▪ *Sometimes* ▪ *Rarely* ▪ *Never*

ASSESSMENT

16. The assessment process (CAT / Assignments / Terminal Examinations / Review) at TCE is fair and unbiased.

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

17. The tasks given in assignments have helped in enhancing your problem solving and communication skills.

- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

18. The assessments are designed and evaluated appropriately to assess higher order thinking skills.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
19. The assessments provided the right level of challenge and an opportunity for collaborative/co-operative learning.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
20. Communication, Critical thinking, Collaboration, Creativity are given importance in assessments.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*

SUPPORT SYSTEM/INFRASTRUCTURE

21. The institute takes active interest in promoting internships / student exchange programmes / field visits opportunities for students.
- *Regularly* ▪ *Often* ▪ *Sometimes* ▪ *Rarely* ▪ *Never*
22. Efforts are made by the institute/ teachers to inculcate soft skills, life skills and employability skills to make you ready for the world of work.
- *Regularly* ▪ *Often* ▪ *Sometimes* ▪ *Rarely* ▪ *Never*
23. The institute provides opportunities for cocurricular / extra curricular activities.
- *Regularly* ▪ *Often* ▪ *Sometimes* ▪ *Rarely* ▪ *Never*
24. Course enrollments, course feedback, tracking of attendance and grades are made easier with the in-house automation software for the academic process (TCENet Gen3).
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
25. In connection with the implementation of Outcome Based Education, Course Outcomes and Programme Outcomes are assessed periodically and subsequent actions are taken for continuous improvement.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
26. A mentoring/tutor system is available to identify your strengths and weaknesses and encourage you with providing the right level of challenges.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
27. Classrooms are well equipped with good Audio System/Multimedia Projectors/Digital Boards/Wi-Fi connectivity.
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
28. Library is digitized and includes sufficient count of reference and text books and access to international and national journals
- *Strongly Agree* ▪ *Agree* ▪ *Neutral* ▪ *Disagree* ▪ *Strongly Disagree*
29. Record your suggestions for enhancing the quality of Teaching Learning process at TCE.

COUNT OF RESPONSES – DEPARTMENT WISE

Department	Count of Responses
Civil Engineering	88
Mechanical Engineering	68
Electrical and Electronics Engineering	127
Electronics and Communication Engineering	61
Computer Science and Engineering	143
Information Technology	291
Mechatronics	42
Architecture	17
Total Responses	837

SUMMARY OF RESPONSES

S.No	Questions	Average
Q1	The curriculum is well balanced, updated periodically and satisfies the present needs.	3.05
Q2	Exposure to industrial practices is provided through industry supported courses/ seminars/ guest lectures/ field visits/ student internships	2.81
Q3	The curriculum facilitates interdisciplinary learning through foundation electives and general electives	3.09
Q4	The curriculum has adequate number of practical courses / theory cum practical courses/ Project works for skill development.	3.16
Q5	The Special Interest Groups (SIG) and programme electives have helped you in specialization of your area of interest.	2.63
Q6	The implementation of the Choice Based Credit System (CBCS) has enabled you to enroll in the courses and slots you opted for.	3.16
Q7	Adoption of Conceive, Design, Implement, Operate (CDIO) framework in TCE undergraduate curriculum has enriched the technical and professional skills.	3.08
Q8	CDIO Skill based courses like Engineering Exploration, Lateral Thinking, Design Thinking, Project Management, System Thinking are facilitating participation in international contests / competitions	3.01
Q9	Audit courses like Environmental Sciences, Constitution of India, Professional Ethics etc., created social awareness	3.12
Q10	How much of the syllabus was covered in the class?	3.17
Q11	The instructors adopt active and collaborative learning strategies like Think Pair Share, Flipped Classroom, Problem Based Learning etc.,	2.87
Q12	The instructors use a variety of ICT Tools and Learning Management Systems like Moodle, Canvas, Google Classroom are effectively used for sharing of resource materials, conducting assignments, discussions and quizzes	3.29
Q13	Instructors are readily available for clarification of doubts and for personal mentoring.	3.21
Q14	Laboratories are well equipped with appropriate hardware and software for the conduct of practical classes/project works.	2.93
Q15	The institute provides support for participation in online certification from NPTEL, Coursera, edX etc.,	3.04
Q16	The assessment process (CAT / Assignments / Terminal Examinations / Review) at TCE is fair and unbiased.	3.2
Q17	The tasks given in assignments have helped in enhancing your problem solving and communication skills.	3.07
Q18	The assessments are designed and evaluated appropriately to assess higher order thinking skills	3.08

S.No	Questions	Average
Q19	The assessments provided the right level of challenge and an opportunity for collaborative/co-operative learning,	3.05
Q20	Communication, Critical thinking, Collaboration, Creativity are given importance in assessments	3.07
Q21	The institute takes active interest in promoting internships / student exchange programmes / field visits opportunities for students.	2.81
Q22	Efforts are made by the institute/ teachers to inculcate soft skills, life skills and employability skills to make you ready for the world of work.	3.01
Q23	The institute provides opportunities for co-curricular / extra-curricular activities	3.15
Q24	Course enrolments, course feedback, tracking of attendance and grades are made easier with the in-house automation software for the academic process (TCENet Gen3).	3.35
Q25	In connection with the implementation of Outcome Based Education, Course Outcomes and Programme Outcomes are assessed periodically and subsequent actions are taken for continuous improvement	3.12
Q26	A mentoring/tutor system is available to identify your strengths and weaknesses and encourage you with providing the right level of challenges.	3.07
Q27	Classrooms are well equipped with good Audio System/Multimedia Projectors/Digital Boards/Wi-Fi connectivity.	2.79
Q28	Library is digitized and includes sufficient count of reference and text books and access to international and national journals	3.03

DETAILED ANALYSIS OF RESPONSES

S.No/Likert Scale	Count of responses					Responses (in %)				
	4	3	2	1	0	4	3	2	1	0
Q1	241	438	133	19	6	28.79	52.33	15.89	2.27	0.72
Q2	203	370	190	52	22	24.25	44.21	22.7	6.21	2.63
Q3	249	425	145	14	4	29.75	50.78	17.32	1.67	0.48
Q4	312	396	102	21	6	37.28	47.31	12.19	2.51	0.72
Q5	197	265	275	68	32	23.54	31.66	32.86	8.12	3.82
Q6	318	370	122	23	4	37.99	44.21	14.58	2.75	0.48
Q7	249	438	130	12	7	29.78	52.39	15.55	1.44	0.84
Q8	255	406	138	26	11	30.5	48.56	16.51	3.11	1.32
Q9	302	392	108	22	12	36.12	46.89	12.92	2.63	1.44
Q10	424	248	84	55	26	50.66	29.63	10.04	6.57	3.11
Q11	211	395	173	44	14	25.21	47.19	20.67	5.26	1.67
Q12	366	371	87	9	4	43.73	44.32	10.39	1.08	0.48
Q13	334	380	108	10	5	39.9	45.4	12.9	1.19	0.6
Q14	240	370	180	29	18	28.67	44.21	21.51	3.46	2.15
Q15	324	273	194	33	13	38.71	32.62	23.18	3.94	1.55
Q16	338	366	114	12	7	40.38	43.73	13.62	1.43	0.84
Q17	267	416	125	18	11	31.9	49.7	14.93	2.15	1.31
Q18	263	418	129	18	9	31.42	49.94	15.41	2.15	1.08
Q19	256	416	139	19	7	30.59	49.7	16.61	2.27	0.84
Q20	267	410	127	23	10	31.9	48.98	15.17	2.75	1.19
Q21	265	270	214	61	27	31.66	32.26	25.57	7.29	3.23
Q22	276	359	161	31	10	32.97	42.89	19.24	3.7	1.19
Q23	338	343	116	28	12	40.38	40.98	13.86	3.35	1.43
Q24	416	321	83	11	6	49.7	38.35	9.92	1.31	0.72
Q25	277	425	118	10	7	33.09	50.78	14.1	1.19	0.84
Q26	294	365	141	20	17	35.13	43.61	16.85	2.39	2.03
Q27	202	365	188	53	29	24.13	43.61	22.46	6.33	3.46
Q28	270	371	153	24	19	32.26	44.32	18.28	2.87	2.27

SUBJECTIVE FEEDBACK – SAMPLES

Good
i have no suggestions
Few current courses can be added, which makes to be industry ready
Good
The existing system is good and specific to students welfare
Keep it up
None
Promote more intern opportunities and please provide attendance for that.
Good
More creative way of online teaching
More interactive activities
CDIO framework works good to me, but students need to taught about the time frame to complete a project in each semester.
Wifi in hostels could still more improved with higher rates and functioning of generators in hostel needs to be improved
More Hands-On learning
Assignments, activities, home works given to the students can be reduced
Student exchange programs with International universities are much needed
All staffs should be easy to contact that is to talk and very kind and syllabus should not be very tough because of that we are getting stressed
Making theory cum practical (TCP) courses more effective by making the concepts learn at lab through our trials instead of teaching the theory part in a separate session and having separate lab sessions.
Happy with learning scheme

ACTIONS TAKEN FOR IMPROVEMENT

- Introduction of TCE Proficiency Scale in order to address Cognitive, Psychomotor and Affective domains of learning

TPS	Proficiency	Cognitive	Affective	Psychomotor
TPS1	To have been exposed to	Remember	Receive	Perception, Set
TPS2	To be able to interpret and imitate	Understand	Respond	Guided Response
TPS3	To be skilled in the practice or implement	Apply	Value	Mechanism
TPS4	To be able to participate in and contribute	Analyse	Organise	Complex Overt Responses
TPS5	To be able to judge and adapt	Evaluate	Organise	Adaptation
TPS6	To be able to lead and innovate	Create	Characterize	Origination

- The following new courses were introduced in the B.E./B.Tech. Curriculum to promote Conceive, Design, Implement and Operate (CDIO) skills leading to product development
 - 18ES150 Engineering Exploration
 - 18ES290 Lateral Thinking
 - 18ES390 Design Thinking
 - 18ES490 Project Management
 - 18ES590 System Thinking
 - 18ES690 Engineering Design Project
 - 18ES790 Capstone Design Project
- Capacity Building Workshops for the faculty members to improve pedagogical skills and effective utilization of ICT Tools
 - Two Week Workshop on Pedagogy for Online and Blended Teaching Learning Process by IIT-B under T10KT programme
 - Use of ICT in Education by IIT-B under T10KT programme
 - Development of CDIO based Undergraduate Engineering Curriculum by the Pedagogy Group of TCE, Madurai
 - Indo-Universal collaboration for Engineering Education (IUCEE) Engineering Educators Certification Programme
- Automation of TCE Academic process
- Participation in International CDIO Conferences and workshops. TCE became a member in Worldwide CDIO Initiative in March 2019.
- Inclusion of Community projects in Academics in association with IUCEE
- Introduction of Lecture Capturing System in the Classrooms

- Establishment of Centre for Robotics, product Development Lab, IoT Lab Green Energy Lab and Design Studio.