

Toc H



TIST

INSTITUTE OF SCIENCE & TECHNOLOGY



STRATEGIC PLAN

2018-2030

Internal Quality Assurance Cell





About TIST

Toc H Institute of Science and Technology (TIST) was established in the year 2002 by Toc H Public School Society as the silver jubilee project of Toc H Public School, Vyttila. TIST Management comprises of 13 service minded academicians who focus on education as their primary mission. TIST is affiliated to APJ Abdul Kalam Technological University (KTU). It was affiliated to CUSAT till 2015. The college is accredited by NAAC, National Board of Accreditation (CSE, CE, ECE, ME, SF), NIRF Innovation (in the band 151-300) ISO9001:2015, Band Performer in ARIIA and possess 2f status.

TIST Offers 9 UG programmes: Computer Science & Engineering (CSE), Information Technology (IT), Electronics & Communication Engineering (ECE), Robotics & Automation (RA), Civil Engineering (CE), Mechanical Engineering (ME), Safety & Fire Engineering (FS), Electrical & Electronics Engineering (EEE) and Electrical & Computer Engineering (EL) and 5 PG programmes: ECE (Wireless Engineering), ME (Thermal Engineering), EEE (Power Electronics), CE (Construction Engineering) and CSE (Data Science). TIST is an approved research centre of KTU with 11 research supervisors and 12 research scholars.

TIST, provides an educational environment that incorporates many novelties in the curriculum, within the University prescribed parameters. Interdisciplinary collaborations are encouraged in projects and the laboratories are equipped with modern amenities, to cater to the emerging needs of industries. Social commitment is met by offering scholarships to the deserving, economically backward rural students. Creative content is given priority while adopting Outcome Based Education (OBE) and pedagogy models like Revised Bloom's Taxonomy and Creative Learning Process.

TIST continuously monitors the academic performance of all our students to ensure they remain motivated and focused. Department of Applied Psychology and Counselling offers one to one counselling to students along with strong mentoring support by faculty members. We also encourage them to take part in activities and events such as skill development programs, internship programs, industrial trainings, expos, conferences and competitions. Additionally, IEDC TIST organizes programs to directly expose our students to entrepreneurs to create awareness among them about the industrial demands and expectations and has been elevated to the position of (Technology Business Incubator) TBI. TIST has various centres of excellence which includes L&T Switchgear Lab, Telepresence lab, Industrial Lab in Air conditioning setup by DAIKIN etc for imparting training to students and society. Professional Associations include IEEE, IEEE-CS, ISTE, CSI, IGBC, KBAIC, ASCE, IIWT, ASME, IIPE etc. Toc H launched a mini IT company named "Link Ur Codes" to provide skill development and consultancy services. We have been able to maintain excellent placement records over the years and have been successful in providing core placements.

TIST has signed MOU with ASAP (Additional Skill Acquisition Programme), an MHRD and Govt of Kerala initiative to conduct various certification courses which includes AI, ML, coding skills, Business analytics, Robotics Process Automation, cloud computing etc. We have associations with MIR labs USA, Aptive Connection Systems Private Ltd, ICTAK, Technolodge, Oracle academy, Federal academy of Cyber Education, Redhat India, ICFOSS,



Kerala Block Chain academy innovation club, Code chef, Daikin, L&T switchgear Coonoor, National Safety Council, Advanced Centre for Atmospheric Radar Research CUSAT, EyeRoV Technologies, HYDAC etc. As a part of MOE's innovation cell we have tie up with Atal Tinkering Labs of nearby schools. We also have a Telepresence lab which connects us to all IT parks in Kerala.

Toc H MBA is the First Institute in Kerala to partner with University of Pozega, Croatia under the prestigious ERASMUS + Mobility programme. (European Community Action Scheme for the Mobility of University Students). A Memorandum of Understanding for academic, scientific, and cultural cooperation between the University of Kelaniya, Sri Lanka, and the Toc H Institute of Science and Technology, Kerala, which was initially signed in 2014, was reviewed in 2023 for a period of five years. The fruitful association has resulted in seven student exchange programmes, two jointly organised international seminars, and co-hosting the first ever Indo-Sri Lankan research collaboration (ICBI2018) at TIST campus. Other International Collaborations include MOU with Odisha state academy of Civil Engineering and architecture, Singidunum University, Sinergija University and University of Chile. A 2D Video disdrometer has been installed in Toc H campus as a part of Ministry of Earth Science Project in the year 2022 for joint research works between Department of Electronics, Joanneum Research & ACARR CUSAT. Safety & Fire Engineering Department of Toc H Institute of Science & Technology has been approved by Board of Certified Safety Professionals and approved as a Graduate Safety Practitioner® (GSP®) Qualified Academic Program (QAP), which helps in improving our global visibility.

TIST has received funds/infrastructure from KTU CERD, UBA, AICTE, KCSTE, MODROB, ACCAR, Kerala state IT infrastructure, District Industries Centre, Chalo India Start Up Drive etc. Through Unnat Bharat Abayan we are linked to 5 nearby panchayats and have completed 5 socially relevant funded projects. TIST is K-DISC's partner under One District One Idea-MSME innovation clusters programme and have received funding worth Rs.9lakhs. TIST undertakes consultancy works of various government & private sectors. The consultancy works undertaken by the institute include preparation of DPR for various projects viz. Rehabilitation of Street vendors, Pollution abatement of River Periyar, Performance evaluation of Kochi Metro under NATPAC etc. We are the technical partner of Mulanthuruthy Panchayath for PMAY scheme. We have Govt. certified water analysis centre at campus. TIST has 12 patents to its credit.

TIST has received funding from AICTE for setting up SPICES lab for promoting interests, creativity and ethics among students. In order to bridge the gap between industry and academics, the Department of Electronics has launched SPAN- Skill Planning and Acquisition cell that will identify and plan skill development programs according to current industrial requirements. Several social outreach programmes, hackathons and contests were conducted for our own students and schools in our vicinity. The Department of Electronics has established the IMPACT Lab where creativity, innovation and social mindedness can flourish. The focus areas of the IMPACT Lab include innovations in embedded systems, IoT and other communication technologies and image processing and vision-based techniques to support agriculture, weather, disaster management etc. Our students won several prestigious awards and have participated in CANSAT competition and University Rover Challenge, USA.



TIST is a member of MHRD's Innovation Cell (MIC). The institution's Innovation Council (Toc H IIC) aims to streamline and strengthen the innovation and start-up ecosystem in the campus so that the students can develop the skill set which enables critical thinking, design thinking, innovative thought process and encourages an entrepreneurial mindset. To enhance technical & scientific knowledge TIST library is well equipped with various journals & transactions and is a member of National Digital Library of India.

Our students participated in Government community projects like Pollution Abatement Project, Mapathon, Mission Free Flow, Sampoorana Jalasuraksha Mission, LSGD road surveys, Performance Evaluation of Kochi Water Metro, Impact of Integrated Feeder Services for Encouraging Public Transport Patronage, conducted in collaboration with KSCSTE-NATPAC, street vendor rehabilitation projects, sensory garden for Mithram Special School and DPR preparation for women's hostel with daycare for Mulanthuruthy Blockpanchayat under PMAY. TIST transformed Thuruthikkara to a Digital Village.

TIST NSS and Karma received special appreciation from IMA Blood cell Cochin for voluntary Blood Donation. TIST has conducted various social outreach activities like road safety campaigns, Marathons, fire and safety training, electrical safety audits, mock safety drills, training programs on first aid and CPR and has involved actively in combating Brahmapuram fire hazard.

Vision, Mission, and Quality Policy

Vision of the Institution

To become a globally recognized institution that develops professionals with integrity who excel in their chosen domain making a positive impact in industry, research, business and society.

Mission of the Institution

- To provide the ambience necessary to achieve professional and technological excellence at the global level.
- To undertake collaborative research that fosters new ideas for sustainable development.
- To instill in our graduates ethical values and empathy for the needs of society.

Quality Policy

TIST is committed to create professional and skilled engineers through a value based exemplary education system by way of innovative teaching based on advanced pedagogy with global perspectives, job oriented industry based training using high quality resources,

manpower, infrastructure and continuous research which facilitates professional growth and personal development with empathy for the need of society for removal of social and economic disparity.

TIST Governing Body

The following are the members of Governing Body of Toc H Institute of Science and Technology

Sl No:	Member Name	Member Details
1	Dr. Alex Mathew	President, Toc H Public School Society
2	Mr. Kurian Thomas	Manager, Toc H Public School Society
3	Mr. Madhu Cherian	Secretary, Toc H Public School Society
4	Mr. N.J. Johnson	Treasurer, Toc H Public School Society
5	Mr. George Thomas	Chairman of the Governing Body, General Manager, (PR & Admin), BPCL, Kochi Refinery
6	Prof. (Dr.) P.G. Sanakaran	Pro VC CUSAT
7	Dr. A Unnikrishnan	Associate Director at NPOL, DRDO, (Retd.)
8	Mr. Ramesh Nair	CMD, APTIV Connection Systems, India
9	Prof. (Dr.) Preethi Thekkath	Principal, TIST (Governing Body Secretary)
10	AICTE Nominee	
11	Syndicate Nominee	
12	Dr. Deepa Elizabeth George	Vice Principal, TIST, HOD, Dept. of Electronics, TIST
13	Dr. S Perumal Sankar	PG Dean, Professor, Department of Electronics, TIST
14	Dr. Georgina Binoy Joseph	UG Dean, Asso. Prof., Dept. of RA, TIST

SWOC Analysis

Strengths

- Rich Legacy and Established Brand Name
- NAAC Accredited Institute
- 5 NBA Accredited programs with 3 programs having score above 650
- NIRF Innovation Ranking in 151-300 band
- Approved Research Center of KTU with KTU Recognized Research Supervisors
- TIST innovation Council (IIC) - one among the 14 governing members of MIC (Ministry of Education's Innovation Cell).
- Well-built Leadership



- Qualified, experienced, and dedicated faculty members
- Excellent Infrastructure
- Developed Effective Teaching-Learning Pedagogies
- MOUs with premier institutions and foreign universities
- Ranked among the first 20 colleges in aggregate results published by KTU
- Achieving University Ranks
- Close proximity to industries and R&D organizations
- Good placement statistics
- Funded research and consultancy services
- Student start-ups funded by Kerala Start up Mission
- Industry Institute Interactions at pace through MoUs, IIC, IEDC and professional associations.
- State/National/International Awards and Achievements for student projects/hackathons.
- ASAP Advanced Skill Development Centre offering futuristic courses.
- Active Student Community Learning Groups in Campus
- Mini IT company in campus
- NPTEL Local Chapter
- Faculty & Student Exchange programmes with foreign universities through ERASMUS
- In-house student counselling and mentoring system
- Committed Management with zero profit motive
- Transparency in Admission and Administration
- Scholarships, Fee Waivers and Book Bank Scheme
- Ensuring Gender Equity
- Well placed Alumni
- Strong PTA Support

Weakness

- Remote location of the institute
- TIST is offering programs in engineering and management streams only
- Lack of freedom to frame the syllabus and customize it according to the immediate requirements of the industry.

Opportunities

- Autonomy status for the Institution.
- Research/Industry/Institute Collaborations
- Proximity to Industries/premier Institutes
- Ecosystem for Innovative Hub
- Large acreage of land available can be utilized effectively for infrastructure required for diversification in our education portfolio.

Challenges

- Congestion of Engineering Institutes



- Quality of Admission
- Attrition
- Increase in the rate of migrations to foreign countries before/after the UG course.
- Procuring Government Funds
- Increase Core Placements
- NEP
- Deemed to be University

Internal Quality Assurance Cell (IQAC)

Vision

To promote quality culture as the prime concern of Higher Education Institutions through institutionalizing and internalizing all the quality-enhancing and sustaining initiatives taken with internal and external support.

Objective

The primary aim of the IQAC is

- To develop a mechanism to promote conscious, consistent and catalytic action plans to improve the academic and administrative performance of the institution.
- To promote institutional quality enhancement and sustenance through the internalization of quality culture and institutionalization of the best practices.

Strategies

- a) Ensuring timely, efficient and progressive performance of academic, administrative and financial units;
- b) Adoption of relevant and quality academic and research programmes;
- c) Ensuring equitable access to and affordability of academic programmes for various sections of the society;
- d) Optimization and integration of modern methods of teaching and learning;
- e) Ensuring credible assessment and evaluation processes;
- f) Ensuring the proper allocation, adequacy and maintenance of support structure and services; and
- g) Sharing of research findings and networking with other institutions in India and abroad.

Functions

- a) Development and application of quality benchmarks;

- b) Setting parameters for various academic and administrative activities of the institution;
- c) Facilitating the creation of a learner-centric environment conducive to quality education and faculty development to adopt the required knowledge and technology for participatory teaching and learning process;
- d) Collection and analysis of feedback from all the stakeholders on quality-related institutional processes;
- d) Dissemination of information on various quality parameters to all the stakeholders;
- e) Organization of intra- and inter-institutional workshops and seminars on quality-related themes and promotion of quality circles;
- f) Documentation of various programmes/activities leading to quality improvement;
- g) Acting as a nodal agency of the institution for coordinating quality-related activities, including adoption and dissemination of the best practices;
- h) Development and maintenance of institutional database through MIS for the purpose of maintaining and enhancing institutional quality;
- i) Periodical conduct of Academic and Administrative Audits along with their follow-up activities; and
- j) Preparation and submission of the Annual Quality Assurance Report (AQAR) as per the guidelines and parameters of NAAC.

IQAC Members

Sl No:	Member Name	Member Details
1	Dr. Alex Mathew	President, Toc H Public School Society
2	Prof. Dr.Preethi Thekkath	Principal, TIST, IQAC Chairperson
3	Mr. Ramesh Nair	Country Managing Director, APTIV Connection Systems, India
4	Dr. Deepa Elizabeth George	IQAC Coordinator, Vice Principal, HOD, DoE
5	Dr. Perumal Sankar S	Professor, Dean PG Studies
6	Dr. P I Paulose	Professor, Science & Humanities
7	Dr. K J John	Professor, Science & Humanities
8	Mr. Renji Kurian	Member, Mulanthuruthy Panchayat
9	Dr. Georgina Binoy Joseph	Dean Academics UG (I/c) & NBA Coordinator
10	Dr. Sreeja M S	HOD, Science & Humanities
11	Dr. Rasmi P S	HOD, IT
12	Dr. Vasudev R	HOD, CE



13	Dr. Sreela Sreedhar	HOD, CSE
14	Dr. Rajesh Koheril	HOD, ME
15	Dr. George C Mathew	HOD, MBA
16	Mr. Thomas A Vetteth	HOD, S&F
17	Ms. Mangala Devi K T	HOD (I/C), EEE
18	Dr. Reshmi R	HOD, Mathematics
19	Ms. Sangeetha S	NAAC Coordinator
20	Mr. C J George	AM officiating
21	Mr. Pramod Chandran	Project manager, IBS Technologies, Alumni
22	Ms. Shilpa Hari	Student Representative

Strategic Plan (2018-2030)

IQAC ensures overall holistic development of Institute and excellence in the following key domains

- **Curricular Aspects**
- **Teaching-Learning and Evaluation**
- **Research, Innovations and Extension**
- **Infrastructure and Learning Resources**
- **Student Support and Progression**
- **Governance, Leadership and Management**
- **Institutional Values and Best Practices**

Short Term Goals

Domain: Curricular Aspects

Goal 1 Ensuring Effective Curriculum Planning and Delivery

Deployment of Goal 1

Curriculum Planning

- Academic Advisory Meetings
- Identifying and bridging curriculum gaps
- Adherence to University and College Academic Calendar
- Preference based subject allotment



- Preparation of class-wise timetables
- Detailed Course plan for Theory and Labs
- Usage of ERP
- Providing adequate library resources

Curriculum Delivery

- Chalk and board
- PPTs
- Illustrative models/ Format for Classroom Teaching (FCT)
- Creative Learning Process
- ICT tools: Interactive Boards, Telepresence Lab, Webex/MS Teams/ Google Meet/ ERP
- NPTEL videos, Case studies
- Role plays, modelling and simulation
- Guest lectures
- Invited talks, workshops
- Industrial visits
- Internships
- Peer Teaching, Peer Learning.
- RBT based pedagogical approach
- Periodic Review of coverage of syllabus
- Class Committee/ Group Advisory Meetings
- PTA Interactions/meetings
- Course File Preparation
- Formulation and Mapping of Course Outcomes
- Course End Survey
- Attainment of Course and Program Outcomes and its remedial actions
- Internal and External Audits

Conduct of Continuous Internal Assessment

- RBT based Question Paper Preparation
- Question Paper Scrutiny Committee
- Time-Table Preparation by IA cell
- Assignments
- Class Tests
- Question Bank
- Tutorials
- Remedials
- Continuous Evaluation in Labs
- Open Ended Experiments
- Viva -Voce

Goal 2 Promotion of certificate/value added online and offline courses

Deployment of Goal 2



- Conducting Value Added/Online Courses through NPTEL Swayam
- Conducting KTU Recommended MOOC Courses, UDEMY, coursera courses
- Conducting ASAP courses
 - Artificial Intelligence and Machine Learning (NSQF Level 7 certificate from Govt. of India)
 - UI Path – Robotic Process Automation (RPA)
 - Google Associate Cloud Engineer
 - Artificial Intelligence and Machine Learning by IBM
 - Business Analytics by IBM
 - Coding Skills by ICTAK
 - Here Maps – Maps and Location Technology Course
 - Amazon Web Services (AWS)
- Conducted Tech4All by Cognizant – a CSR initiative for empowering digital literacy.
- Certificate course on “Building Information modeling” by KTU
- NEBOSH certification
- Certificate course on “First Aid”
- Certificate course on Industrial Automation and PLC by Bosch Rexroth GPTCK Centre of Competence in Automation Technologies
- Certification on Robotics by Verzeo
- Certification on Advanced Driver Assistance System & Machine Learning Course by TechMaghi.
- Certification on Ansys basic to professional training program by Eleation
- Certification on solid works training program by Eleation

Goal 3 Integration of crosscutting issues enhancing curriculum enrichment.

Deployment of Goal 3

- The institution meticulously integrated crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment, and Sustainability into the KTU 2019 scheme curriculum through a series of strategically planned courses that span across the four years of study.
- Besides academics, institute hosts many programs/activities, guest lectures/webinars relevant to cross-cutting issues throughout the academic year for holistic development of students. The programs are organized under department associations and clubs/cells.

Following are the cells and clubs focusing on professional ethics/ gender and human values/Environment and Sustainability

- Career Guidance and Placement Cell
- Women Development Cell
- Anti-Ragging Cell
- Student Grievance Redressal Committee
- Student Welfare Committee
- Internal Complaints Committee
- National Service Scheme
- Karma
- Young Indians
- ENCON club



- Major Activities includes flood relief support, Blood Donation, Stem Cell Donation, Orphanage Visits, Special School Visits, Post covid support, workshop on “Emerging Trends in Sustainable and Resilient Infrastructure, Session on Gender Equality, Yoga sessions, Self Defense Workshop etc.
- KARMA received award of appreciation from the MLA of Ernakulam for the outstanding contribution.

Goal 4 Bridging the gap between industry and academics

Deployment of Goal 4

- KTU encourages internships in various industrial organizations both government and private by including the same in the curriculum.
- Field projects undertaken by Institute includes: Questionnaire Survey for the Performance Evaluation of Kochi Water Metro, Logo Launch and Project Orientation of Mission Free Flow, Mission Free Flow to rejuvenate the free flows in the various water bodies, Rebuild Kerala Initiative of Govt. of Kerala for the rehabilitation of roads under LSGD, Pollution Abatement Project for Periyar river, Sampoorana Jalaparishodhana by providing Technical assistance to Kerala Government’s prestigious project “Complete Water Safety Mission”
- B.Tech KTU curriculum include mandatory project work in their curriculum in 4th year of study.

Goal 5 Efficient feedback system for the institute

Deployment of Goal 5

- Feedbacks from students
 - Faculty Feedback
 - Course End Survey
 - Program Exit Survey
 - Event Exit Survey
 - Infrastructure Feedback
- Feedback from Teachers on Courses Handled
- Feedback from Employer
- Feedback from Alumni
- Feedback from Parents

Domain: Teaching-Learning and Evaluation

Goal 1 Enhance Student Enrolment and Profile

Deployment of Goal 1

- Provided Scholarships and fee waiver schemes for bright and economically weaker students



- Commenced multidisciplinary programs like Robotics & Automation, Electrical & Computer Engineering, Safety & Fire Engineering.
- Increased student intake of programs in demand.
- Analysis of previous student data based on nativity, place of schooling.
- Provides Mathematics Foundation Class for Engineering Aspirants
- Utilized social media viz: Instagram, Facebook, youtube, whatsapp, digital publicity through content marketing, Google Ads etc., search engine optimization (SEO), and other media advertising to reach prospective students.
- Upgraded campus facilities and infrastructure
- Orientation on “Introduction to Engineering Programs “ to higher secondary students

Goal 2 Improve the student-teacher ratio for enhancing the quality of education and overall learning experience.

Deployment of Goal 2

- Utilizes social media platforms to reach potential candidates
- Analyzes student enrollment data to identify high-demand and low-demand courses and manage course offerings accordingly.
- Encourages faculty members to pursue higher education and certifications to stay updated
- Improved SFR helps in providing one to one mentoring
- Ensuring participation in Train the Trainer programs
- Conducting and encouraging faculty to attend trainings on pedagogy
- Encourages promotions based on publications, organizing major events, completing MOOC/ NPTEL courses.
- Promotes research activities among faculty members to attract grants and funding opportunities.
- ERP is used to manage efficient interactions between students and faculty
- Recognitions for faculty engaged in best teaching-learning practices.
- Faculty appraisal proforma evaluation done periodically and room for improvement is suggested.

Goal 3 Enhance teaching learning experience using student centric methods, ICT-enabled tools and online resources.

Deployment of Goal 3

- Institute has adopted Outcome Based Education
- Student-centric approaches creates dynamic learning environment through Experiential learning, participative learning, and problem-solving methodologies
- Promotes creativity and innovation.
- Experiential Learning is promoted through Internships, Technical Fests, Competitions, Industrial Visits, Laboratory Courses, Skill Development Courses, Workshops, Student Exchange Programs etc.
- TIST promotes the participative learning through conduct of



- workshops
- Seminars and Webinars
- Student Summits
- Paper Presentations and Publications
- Group Discussions
- Debates
- Quizzes
- Peer teaching
- Student Communities
- Project Expos
- Technical Fests by Departments
- Campus Fest-Advay, Mudra, De'Novo
- Community services through NSS, KARMA, Yi etc.
- Awareness Programs
- TIST incorporates problem-solving methodologies in students through
 - Mini and Major Projects in Curriculum
 - Hackathons
 - Project/ Idea Competitions
 - Funded projects
 - Technical Assistance for solving societal problems
- Interactive boards, smart classrooms,
- Online-certification courses and virtual labs,
- Koha powered libraries with e-Shiksha, e-books, e-journals,
- ERP and online meeting platforms -MS TEAMS, WEBEX, GOOGLE MEET
- Member of the National Digital Library of India Club (NDLI Club)

Goal 4 Ensure mechanism of internal/external assessment is transparent

Deployment of Goal 4

- Conducts assignments, internal assessment tests (2 Nos:) and class tests for theory courses and lab tests for laboratories
- Internal Assessment Cell conducts Internal Assessment Tests and schedule is prepared based on academic calendar and circulated to the department.
- During pandemic, internal assessments conducted online mode using ERP.
- Question paper scrutiny committee ensures questions meet RBT, COs and Difficulty levels.
- Answer key and evaluation scheme of each question paper is prepared with question paper.
- Answer scripts evaluated strictly on scheme within a week and provides effective feedbacks to students.
- Remedial Sessions are organized for weak performers
- Assessment for laboratory courses includes practical records/output, regular class viva and model lab examination.
- All external examinations are conducted at colleges as per university guidelines through University Exam Cell with principal as Chief Superintendent
- An authorized person will log on to web portal to download question paper.



- Once examinations are over, invigilator counts and tally answer scripts and return them to exam cell within 15 minutes after end of examination.
- In case of malpractice, answer scripts are packed along with confiscated incriminating material, report of the invigilator and Chief Superintendent to the university.
- Transparency and robustness of assessment system is ensured through regular audits by internal audit cell and external audits by KTU and ISO.

Goal 5 Ensure grievance redressal system is time bound and efficient

Deployment of Goal 5

- Any act of indiscipline/unfair practices in internal exam is dealt at department level and external exams are referred to Disciplinary Action Committee (DAC).
- Based on the report and evidence submitted by the faculty, DAC initiate an enquiry giving the concerned student a chance to explain the case and committee recommends the action referring to guidelines of KTU.
- Students may appeal for Grievances and Appeal Committee of university to relook the matter.

Goal 6 Incorporate reforms for efficient evaluation process.

Deployment of Goal 6

- Question Paper Scrutiny Committee formulated for Internal Exam
- Reframed the question paper pattern as per the KTU regulation
- Implemented Change in duration of internal exams
- Any act of indiscipline/unfair practices in internal exam is dealt at department level and external exams are referred to Disciplinary Action Committee (DAC).
- Online circulars and changes made in the recommended punishments for the offences committed by the students in the Examination Manual 2022, with a view to reduce the malpractice cases.
- Reforms in examination procedure and examination control room is published by KTU
- Renovation of Exam Cell

Goal 7 Improve student performance and learning outcome

Deployment of Goal 7

- Stating Program Outcomes and Course Outcomes for all programs.
- Ensuring dissemination through website and key locations of campus.
- Content beyond syllabus is identified to mitigate the curriculum gaps
- At the end of semester Course end surveys are taken and CO attainment is computed for all courses.
- PO Attainment is carried out at the end of every academic year.
- CO Attainment gaps are mitigated through remedial sessions to ensure improved pass percentage.



Domain: Research Innovations and Extensions

Goal 1 Obtain grants/endowments from diverse governmental and non-governmental sources

Deployment of Goal 1

- Grants received from the following Government and non-government agencies
 - Seed Support Jilla Panchayat Local Economic Development Scheme
 - KTU CERD
 - ISHRAE
 - UBA
 - K-DISC
 - KSCSTE
 - AICTE -RPS
 - AICTE-MODROB
 - Chalo-India Startup
- Endowments in the name of:
 - P.V Joseph in memory of Late Mr. P. V. Joesph
 - Dr. K. Varghese
 - Dr. Job Kuruvilla
 - The Alexander
 - Puthusseril
 - Pynadath
 - Moolamkuzhi Memorial
 - Chev P Thomas
 - Dr. P K Sivanandan
 - Georgekutty P Thattil
 - Kadavil Charitable Trust
 - Shri. Mathew Joseph Memorial Award
 - Mr.Eby & Mr.Ansu John Award

Goal 2 Establish a vibrant innovation ecosystem in campus

Deployment of Goal 2

- IEDC serves as catalyst for fostering innovation and entrepreneurship
- IEDC recognized as TBI
- Prototype Development Support through MoUs with Industries
- Industry Interaction Cell in every department
- Industry Innovation Cell in Campus
- IPR awareness sessions conducted by AICTE, KTU, IQAC-TIST
- Formulated IPR Cell
- New learning culture through FOSS, MOOC, Coursera, NPTEL and self-learning communities
- Encourages hackathons, project competitions and summits



- AICTE has acknowledged the efforts and funded our activities for the year 2021-22 under the AICTE Scheme for Promoting Interests, Creativity, and Ethics among Students (SPICES)
- Received MSME Innovation Promotion funding for local economic development.
- Participation in Yukthi-Innovation Challenge, YiP
- Initiated setting up of FAB Lab.
- Received 10 patents
- TIST chosen as one of the 14 governing members from more than 700 IIC institutions from the state of Kerala in 2023.
- NIRF Innovation ranking in the band of 151-300
- ARIIA Band Performer
- IIC star rating

Goal 3 Enhance research outcomes by fostering quality research.

Deployment of Goal 3

- Published papers/books/chapters in edited volumes in national/international conferences/ journals and presented papers at prestigious conferences to increase visibility and credibility.
- Networking with editors, reviewers, and influential figures in the field and have organized events like funded International/National conferences, seminars, and training.
- Funding opportunities from government/private agencies and industry partners to support research endeavors
- Asst. Prof. Elsaba Jacob, mentor CSI received Best CSI Student Branch Award at the 53rd CSI Annual Convention.
- Dr. Deepa Elizabeth George received “Best Mentor Award” for the outstanding guidance and leadership in the development of the project- Veeksha-Shristi2023, a National Level Technical Project Exhibition.
- Dr. Deepa Elizabeth George elevated to the grade of IEEE Senior Member.
- Asst. Prof Surej Rajan C received the “Best Paper award in the 6th Biennial International Conference on Emerging Trends in Engineering & Technology under the Section of Material Science & Engineering organized by Govt. Engineering College, Thrissur in December 2020.
- Published book on Basics of Electrical Engineering (For APJAKTU, Kerala) under S-Chand Publication by Ramana Pilla M, Surya Kalavathi and Preethi Thekkath.

Goal 4 Sensitizing the students to social issues for their holistic development and for the benefit of the neighborhood connectivity.

Deployment of Goal 4

- NSS organized Suraksha Surabhi, De-Worming Campaign, Ente Kulam Padhathi, Blood Donation Camp, Cleaning of KSRTC Buses, Planting Trees in



- the campus, Lahari Vimukta Keralam, Flood Relief Camp, Visit to Old Age Home, Punarjani Mini Camp, Road Safety Survey and Drug free India program.
- Special appreciation received for NSS Unit of Toc H and KARMA Toc H from IMA Blood Cell Cochin for Voluntary Blood Donation.
 - Sanctioned projects and conducted activities/awareness programs for grama panchayats through UBA
 - Built sensory room and sensory garden for rehabilitation center
 - KARMA organizes blood donation drives, stem cell donation, hair donation, supply of necessities for the needy, special school visit and training sessions
 - Consultancy for Traffic Survey and Soil Test (CBR), Material Testing, Compression Testing etc.
 - Conducted Questionnaire Survey for the Performance Evaluation of Kochi Water Metro
 - Conducted Questionnaire Survey for the Project “Impact of Integrated Feeder Services for Encouraging Public Transport Patronage”
 - One of the agencies for the second-tier quality management system for the Rebuild Kerala Initiative of Govt. of Kerala for the rehabilitation of roads under LSGD
 - TIST visited the various stretches of Periyar river on 12/01/2021 as part of “Pollution Abatement Project for Periyar river”
 - Part of Sampoorna Jalaparishodhana by providing Technical assistance to Kerala Government’s prestigious project “Complete Water Safety Mission” at Amballoor Panchayath
 - Survey for rehabilitation of street vendors at Piravom and Maradu municipality
 - Enlightened neighbourhood women on aquaponics’ role in water conservation and food production.
 - Took part in the Mega Tinkering Activity organized by Atal Innovation Mission (AIM), NITI Aayog, across the ATL Schools in India to celebrate Childrens’ Day.
 - Developed an Automatic Hand Sanitizer with a digital thermometer and handed over to public.
 - Contributing books and stationery, smartphone, fumigating machine etc. through Yi.
 - Energy Safety Survey conducted at Edakkattuvayal Gramapanchayath
 - “Mission Free Flow” project to rejuvenate the water bodies in Mulanthuruthy Block Panchayath.
 - Awareness talk on ‘Impact of Digital Media on Children’, Online Video Game Addiction in Students’ All India Radio, Thiruvananthapuram.
 - ‘Back to School amidst Covid-19’ awareness campaign, awareness seminar on women safety
 - Developed Automatic Hand Sanitizer with a digital thermometer.
 - Mobile App developed to aid online shopping during the lockdown
 - Safety Ride aimed at creating awareness about road safety among students and the general public.

Goal 5 Encouraging internships, on-the-job training, project work, student/faculty exchange and collaborative research through MoUs/linkages

Deployment of Goal 5



- Major MoUs are with
 - Odessa State Academy of Civil Engineering and Architecture, Odessa, Ukraine
 - Odessa State Academy of Civil Engineering and Architecture, Odessa, Ukraine
 - Catholic University of Temuco, Chile
 - Singidunum University
 - Sinergija University
 - Habilete Learning Solutions, a Premier Institute of Industry Skill Development
 - ELEATION
 - Matter Lab
 - ASAP ASDC
 - GITHUB
 - TECHNOLOGDE
 - ICTAK
 - Freston Analytics Pvt. Ltd.
 - ORACLE ACADEMY
 - Federal Academy for Cyber Education (FACE)
 - RedHat India
 - ICFOSS – Foss Cell
 - CodeChef
 - KBAIC (Kerala Blockchain Academy Innovation Club)
 - Logix Space Technologies [Link Ur Codes]
 - UREKA Education, UK
 - VSB Technical University of Ostrava
 - IPCS Global Solutions Pvt. Ltd.
 - L & T Electrical and Automation
 - IROV Technologies Private Ltd
 - Shristi Robotic Technologies
 - GPTCK- Bosch Rexroth ,Centre of Competence in Automation Technologies
 - Aptiv Connection Systems
 - Malabar Extrusion Pvt. Ltd.
 - DAIKIN India Pvt Ltd.
- MoUs with Industries like Infosys campus connect, Speridian etc. provides on-the job training.
- MoU with Advanced Centre for Atmospheric Radar Research (ACARR),CUSAT
- Collaboration with Joanneum Research,Graz,Austria
- The industry-academia collaboration fosters and prepares students for successful careers
- The collaboration provides opportunities for skill development through workshops and industrial visits, ensuring the students are prepared for the demands of the industry.



- Collaborative projects enable the institute to contribute to advancements in the field and establish stronger industry connections.
- Toc H MBA became the First Institute in Kerala to partner with Veleuciliste U Pozegi, Croatia under the prestigious ERASMUS + Mobility programme that offers exchange of faculty and students between these two institutions.

Domain: Infrastructure and Learning Resources

Goal 1 Provide adequate infrastructure and ICT enabled facilities

Deployment of Goal 1

- Well-furnished, ventilated, spacious class rooms and tutorial rooms for conducting classes and laboratories.
- Departments of the institution are equipped with projectors
- Internet bandwidth of 300 Mbps by Asianet and 500Mbps by Kerala Vision.
- Seminar Halls
- Language lab
- Central Library with Digital Facilities and Department library
- State -of-the-art Laboratories
- Telepresence Lab connecting IT parks for virtual conferencing
- Interactive Boards
- Gymnasium
- Indoor and Outdoor Stadiums
- Yoga Training
- Cultural Fest-Advay, Mudra, De Nova
- Sports Day
- Techno Cultural Fest
- Center of Excellence for each Department

Goal 2 Integrate digitalization and ensure optimal usage of library facilities

Deployment of Goal 2

- The library services are offered through
 - Vivekananda Central Library
 - Sarabhai Digital Library
 - C K Prahalad MBA Library
 - Department Libraries
- Automated Central library with modern web-based software KOHA
- Access to Online Public Access Catalogue (OPAC) and Web based OPAC



- Provides Excellent learning resources
viz: DELNET, EBESCO, NDLI, KNIMBUS, Science Direct
- Digital Library Facility
- Organized National conference on Innovative Library Services in Digital Age
- E-books
- International Subscriptions-EBESCO
- E-journals
- Library Hour
- Online renewal of books
- The Plagiarism checking software TURNITIN is also accessible from any location.
- Barcode Reader -gate register for students
- Punching for faculty/student library visits
- Email notification for library users

Goal 3 Ensure robust internet connectivity and sufficient bandwidth allocation and computers facilitating seamless access to digital resources, upgrade and modernize IT facilities

Deployment of Goal 3

- Computer systems in labs, offices, libraries, staff rooms, and hostels are networked and connected (100/1000 Mbps speed) to the server room.
- A local area network is available in all computer labs.
- Wi-Fi facility covers the entire institution: classrooms, hostels, libraries, and labs.
- Maximum number connected to Wi-Fi at a time is 200–300; 2 outdoor access points and 34 indoor access points
- Connections to Wi-Fi networks are authenticated by Mac authentication. Wi-Fi network protected with a Mac address.
- Sophos XG 210 firewall is used for internet connectivity.
- 300 Mbps primary and 500 Mbps backup internet connection
- Maintains 1:3 student computer ratio.

Goal 4 Effective management of expenditure for maintaining campus infrastructure facilities

Deployment of Goal 4

- Budgets are prepared by individual departments.
- The budget proposal is collected under the headings "recurring" and "nonrecurring."
- The individual department budgets are consolidated along with the administration department budget.
- The budgets of all the departments will be consolidated by the accounts officer and presented to the principal, who will further present them to the management for approval and sanction.
- Once it is sanctioned, in the meeting of the heads of the departments, the principal will present the budget allocation to them.



- The principal, along with the accounting department, further monitors the utilization of the sanctioned budget.
- If any special event comes supplementary budget has to be prepared for the same
- Preventive maintenance practices to reduce the frequency of costly repairs
- Competitive pricing and high-quality service delivery from vendors
- Adopted energy-efficient technologies, implementing green building practices, and exploring renewable energy options to minimize long-term expenditures.
- Regular feedbacks from stakeholders

Domain: Student Support and Progression

Goal 1 Empower a more diverse and inclusive student body through scholarships for educational empowerment

Deployment of Goal 1

- Developed comprehensive strategies to promote scholarship opportunities to potential candidates from diverse backgrounds.
- Streamlined the application process for scholarships and made the application link available in website.
- Admitting candidates from under represented demographics.

Goal 2 Organize Capacity building and Skill Enhancement activities

Deployment of Goal 2

- Regularly organizes soft skill and communication skills trainings through placement cell
- Gymnasium facility inside campus
- Physical fitness, yoga sessions, sessions on health and hygiene are organized by Women Development Cell and faculty of Counselling Department of TIST.
- Self-employment and entrepreneurial skills trainings are regularly organized by IIC and IEDC.
- Various activities/sessions organized by Department Associations and Professional Societies are focused on latest trends in technology.

Goal 3 Offer career guidance and counselling sessions

Deployment of Goal 3

- Regularly organizes aptitude trainings from first year onwards through placement cell
- Company oriented counselling sessions prior to recruitments are organized.
- Higher studies related awareness sessions are always included.
- Gate/NET coaching orientation sessions are being organized.

Goal 4 Formulation and execution of cells and committees as per statutory guidelines for student grievances.



Deployment of Goal 4

- Formulated and made aware of Gender Equity policy and Anti Ragging rules
- Formulated the following cells/committees based on the guidelines issued by KTU and AICTE.
 - Anti-Ragging Cell
 - Discipline Committee
 - Student Grievance Redressal Committee
 - Grievance Redressal Committee for Faculty/Staff
 - Anti-Drug Committee
 - Women's Development Cell
- Regular meetings are conducted and cases filed are discussed and action taken is recorded and monitored.
- Implemented online and offline mode for grievance submission.

Goal 5 Promote Participation and Engagement in Sports and Cultural Activities

Deployment of Goal 5

- Provided sports and cultural facilities to students under the guidance of faculty appointed.
- Sports day and cultural fests are organized regularly.
- Duty leave is provided to students qualified for attending events/matches
- University provides grace mark and activity points

Goal 6 Increase Alumni Engagement and Contribution to Support Institutional Growth and Development

Deployment of Goal 6

- Registered Alumni Association
- Regular communication and networking with Alumni
- Alumni supports student scholarships, research initiatives, infrastructure development, and career services.
- Provided opportunities for mentorship programs, guest lectures and advisory boards
- Recognizes and appreciates alumni achievements through public acknowledgment and awards.

Domain: Governance Leadership and Management

Goal 1 Facilitate Institutional Governance and effective implementation of National Education Policy (NEP) through Perspective Planning

Deployment of Goal 1



- Established Decentralized Governance Structures that empower local stakeholders to participate in decision-making processes at various levels of the institution.
- Incorporated innovation in curriculum design, assessment methods, and pedagogical approaches.
- Implemented e-governance systems and digital platforms to streamline administrative processes, enhance transparency and access.
- Formulated comprehensive perspective plans that articulate the institution's long-term vision, goals and strategies.

Goal 2 Incorporate faculty empowerment strategies in decentralized governance practices, strategic planning methodologies, e-governance tools, and NEP implementation strategies.

Deployment of Goal 2

- Following effective performance appraisal system encompassing awards for staff.
- Organizing effective welfare measures like ESI, PF, LIC, Medclaim and medical facilities in campus.
- Offers transportation facilities, cooperative society in campus for confectionaries, stationery, and grocery items.
- Provides opportunity for career development through learning platforms and trainings at zero cost.
- Financial support for professional development activities.
- E-governance practices
 - Institute Website
 - ERP for attendance monitoring, internal calculation, sharing study materials
 - Biometric Attendance for faculty
 - CCTV cameras
 - Organization Email Communication
 - Tally for accounts

Goal 3 Strengthen Financial Management and improve resource mobilization.

Deployment of Goal 3

- Regular monitoring of revenue generation and expenditure tracking in place.
- Financial Audits by chartered accountants
- Pursuing diverse revenue streams beyond the traditional sources.
- Securing competitive research grants from governmental agencies and industry sponsors.
- Implemented cost saving measures especially in energy management.
- Installed solar power plants for feeding server room and different labs. Conventional lamps & fans were replaced by LEDs, BLDC fans & star-rated ACs for energy conservation. Power factor correction with APFC capacitor banks help us in receiving a monthly incentive from KSEB.



- Green IT initiatives such as Energy-efficient hardware, Power management, cloud services, energy-efficient cooling systems in server rooms and responsible disposal of electronic waste are implemented. Green website hosting is done by optimizing website performance using energy-efficient servers.

Goal 4 Establish Comprehensive Quality Assurance framework and strategies through IQAC.

Deployment of Goal 4

- IQAC has formulated clear goals and benchmarks aligned with institutional goals and accreditation requirements.
- External stakeholders, including employers, industry experts, alumni and community partners are included in Governing Body/Advisory Boards for regulating quality assurance.
- IQAC performs SWOC analysis of academic programs, teaching methodologies, student learning outcomes, research activities, support services and administrative functions.
- Established feedback mechanisms, including surveys, student evaluations, peer reviews, and stakeholder consultations, to gather input and insights from faculty, staff, students, alumni, employers, and other stakeholders on areas of improvement and satisfaction.
- Formation of steering committee for NAAC

Domain: Institutional Values and Best Practices

Goal 1 Promote Gender Equity and Sensitization as Integral Components of Social Responsibility Initiatives

Deployment of Goal 1

- Developed Gender equity policy, Women Development Cell, Grievance redressal cell, Internal Complaint Committee cell.
- Gender-Responsive Support Services and Gender-Inclusive Spaces: women's hostels, cctvs, security guides, health clinic, gymnasium, play area, common rooms, sanitary napkin incinerator and transportation facility.
- Gender-Responsive Curriculum courses like “Ethics Governance and Corporate Responsibility”, “Legal Systems for Business, Human Resource Management”, “Discovery of self & others” for MBA and “Constitution of India” for B.Tech.
- Conducted gender sensitization training programs and hackathons, awareness sessions, workshops, social outreach programs etc.
- Encourages women's leadership and participation in decision-making bodies, committees, student organizations, research projects, and academic forums.

Goal 2 Establish Green Campus Practices to promote Environment and Sustainability

Deployment of Goal 2



- Developed and implemented Environmental Policy, Energy Management Policy, Water Management Policy, Energy Policy, Waste Management Policy, E-Waste Management Policy and Scrap Declaration and Disposal Policy,
- Conduct Regular Audits and Energy Conservation Assessments
- Implemented energy-efficient technologies and renewable energy solutions.
- Received Energy Management Certificate and Environmental Management Certificate for complying with ISO standards from KVQA.
- Implemented water conservation measures, such as rainwater harvesting and water-efficient landscaping.
- Biogas plants & centralized cooking using steam rice boiler at hostels reduce LPG usage. Recycled cooking oil from canteen is converted into biodegradable greases and diesel, promoting reuse and sustainability. “Zero-waste cooking”, is practiced. Kitchen supplies sourced from local providers reduce carbon footprint.
- Installed solar power plants for feeding server room and different labs. Conventional lamps & fans were replaced by LEDs, BLDC fans & star-rated ACs for energy conservation. Power factor correction with APFC capacitor banks help us in receiving a monthly incentive from KSEB.
- Green IT initiatives such as Energy-efficient hardware, Power management, cloud services, energy-efficient cooling systems in server rooms and responsible disposal of electronic waste are implemented. Green website hosting is done by optimizing website performance using energy-efficient servers.
- Automatic hand sanitizer for Mulanthuruthy Gramapanchayath, Solar Photovoltaic Bubble Dryer for Edakkattuvayal Grama Panchayat, Portable smoke arrester, Air Quality Index calculator, Light weight concrete blocks using old cloths fibre , Porous concrete block using E- waste,Waste Water Filter using Groundnut and Rice husk to treat heavy metals, D-ANALYZER & Sustainable Cement Concrete reflects our active participation in sustainable development.
- Facilities for Divyangjan
 - Physical facilities
 - Provision for lift
 - Ramp / Rails
 - Braille Software/facilities
 - Rest Rooms
 - Scribes for examination
 - Special skill development for differently abled students

Goal 3 Cultivate an Inclusive Campus Environment to ensure equity and diversity for all community members.

Deployment of Goal 3

- Campus facilities, services, events, and digital platforms are accessible and inclusive for individuals with disabilities, providing reasonable accommodations, assistive technologies, and support services.
- Curriculum courses like “Constitution of India”, “Disaster Management” for B.Tech and “Ethics Governance and Corporate Responsibility”, “Legal Systems for Business, Human Resource Management”, “Discovery of self & others” for MBA.



- International Student and Faculty Exchange Programs
- Cultural and Religious Festivals celebrated in Campus
- Value Based Education viz: UHV for faculty and students
- Scholarships and Fee Waiver Schemes
- Programs organized under Professional Bodies
- Involved in NSS, KARMA, Yi activities
- Sports & Fitness space inside campus

Medium Term Goals

- NBA Accreditation for 5 Programs with score above 675.
- NAAC Accreditation with A Grade
- ISO Certification Renewal
- NIRF Innovation Ranking
- ARIIA Ranking
- IIC Star Rating
- FAB Lab
- Increase PhD holders
- Alumni Association Chapter in Foreign Countries
- Autonomy

Long Term Goals

- NBA Accreditation for all Programs
- TIST Institute of Social Science & Management
- Innovation Hub
- Deemed to be university