Toc H
INSTITUTE OF SCIENCE & TECHNOLOGY
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TIST

Accredited UG Programs   Accredited Institution   NIRF: 151-300(Innovation 2023)   Certified Institution   Approved by AICTE   Affiliated to APJKTU   Sect. 2(f) of UGC Act
5 B.Tech programs (CE, CS, ECE, ME and FS) Accredited by NBA till June 30, 2026, to be renewed thereafter
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i) Title of the Practice: **BEST PRACTICE: 1**

Neighborhood Society Connect: Phase I

ii) Objectives

- **Computer Game Addiction awareness**

- **Disaster management for Preschool Students**

- **Electrical Safety**

- **Old age Home/ Special School Visit**

- **Empowering Women in Aquaponics**

- **Project Expo**

iii) Context :

Catering to social, economic, environmental, occupational and ethical needs of marginalized students and local people.

Addressing computer game addiction, catering to the divyangan, women empowerment, water conservation, health/electrical hazard management

iv) Practice:

- Awareness Talk on 'Online Video Game Addiction in Students' by Dr.Sreela Sreedhar, HOD-CSE, Toc H Institute of Science and Technology in the 'Prabahathabheri' program aired by All India Radio, Thiruvananthapuram.

- Mock drill conducted by Department of Safety and Fire Engineering in association with Mulanthuruthy Fire and Rescue Brigade joined at T.I.M.E Kids Pre School, Mulanthuruthy on 10th of May,2024 , with the intention of preparing for emergency scenarios.

- Electrical Safety Survey, conducted by the National Safety Council-Kerala Chapter (NSC-KC) in collaboration with the Electrical Inspectorate aimed to assess electrical safety in identified houses in Edakkattuvayal Panchayat, Ernakulam.

- **Visit to House of Providence church (old age home), Kacheripady, May 2024**

- Electrical and Computer students had gone on a visit to Sneha Bhavan Special School for Disabled Children, Piravom, as a part of their Social Outreach Program

- Civil Engineering Department, TIST enlightened neighbourhood ladies on aquaponics' role in water conservation and food production. Discussions highlighted eco-friendly farming practices, promoting community resilience

- A project expo *Tathva '23* was jointly organised by Department of Civil Engineering and Department of Mechanical Engineering on 17th November 2023. Project Expo played a vital role in nurturing a culture of innovation, fostering collaboration and encouraging the development of novel solutions to real-world problems

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v)   Evidence of Success:

- **Computer Game Addiction awareness** program yielded positive resulting in getting positive feedback
- Appreciation letter dated 25.05.24 from Time Kids School
- Appreciation letter National Safety Council
- Quality time with inmates with there, engaging the Sneha Bhavan students with songs, music, dance and games. A short film directed by S3 EL student ELVIN ALIAS, was also screened there.
- Attendees gained practical insights into aquaponics, contributing to the collective endeavour of water stewardship and empowerment.
- Provided a platform for our students to gain valuable experience in presenting their work, receiving constructive feedback, and networking with peers and experts

vi)   Problems Encountered:

As TIST is located 30 km away from Kochi city, students and faculty members fail to dedicate time for society connect. So, a specialized academic calendar accommodating academic activities is prepared. To compensate for academic shortfall, Saturdays designated as working days. Overcoming obstacles such as resource acquisition and ensuring widespread participation, Facebook, Instagram, WhatsApp, and online meetups have been adequately used.

BEST PRACTICES : 2

i) Title of the Practice:

Student Innovation Initiatives

ii) Objectives of the Practice:

- Envisages a legitimate method that propels young minds in innovation explorations.

- Transformational change in rural development processes for sustainability

- Promotion of women in innovation

iii) Context

In the lines of vision and mission of the institute, attention diverted to engage students in innovation and entrepreneurship research activities, collaborative research fostering sustainable development to make an impact in industry, research, business, and society.

iv) Practice

IIC,IEDC, R&D (Centre for Coordinating Research Activity) provide suitable promotional and guidance to stakeholders. These cells organize workshops, industrial visits, training programs, Maker village Visits, IEDC SUMMIT 2023 etc.

- IIC, in association with the Department of EEE organized an Exposure and Field visit to Maker village on 07.11.2023.
- IIC, in association with the Department of Safety and Fire Engineering organized "Field visit for problem identification "on 30.11.2023.
- IIC, in association with the Department of Safety and Fire Engineering organized an expert talk on "Process of Innovation Development" on 02.12.2023.
- Workshop 0n "Strategies For Technology Transfer And Ip Evaluation For Startup/MSME'S : IIC, in association with the Department of Robotics and Automation organized Intellectual Property Rights Awareness Workshop on "Strategies for Technology Transfer and IP Evaluation for STARTUP/MSME's" on 21.2.2024.
- Run For Awarness And Innovation In Safety: IIC, in association with the Department Safety And Fire Engineering Organized "Run for Awareness and Innovation in Safety " on 29.02.2024.
- Industrial Training On Digital Design And Verification Using Cadence Tool: IIC, in association with the Department of Electronics organized an "Industrial Training on "Digital Design and Verification using Cadence Tool" on 04.03.2024
- Workshop On Prototype/Process Design And Development: IIC, in association with the Department of Mechanical Engineering organized a Workshop on Prototype/Process Design and Development on 14.03.2024.
- HOW TO PLAN FOR START-UP AND LEGAL & ETHICAL STEPS": IIC, in

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association with the Department of Civil Engineering organized a session on "How to plan for Start-up and legal & Ethical Steps" on 30.03.2024.

- WORLD CREATIVITY AND INNOVATION DAY: IIC, in association with the Department of Computer Science Engineering organized an "World Creativity and Innovation Day " on 22.04.2024.

v) Evidence of Success:

- **KTU-CERD** (**Centre for Engineering Research and Development**) **Funding**: final year B.Tech Computer Science & Engineering students have secured Rs. 35,850 in funding from KTU CERD 2023-'24 under the Student Project Category – CSE for their innovative project, 'Smart Fish Tank Cleaner'.
- The Department of Mechanical Engineering secured funding of KTU-CERD grant of Rs. 41,220/- groundbreaking research project titled "Waste Oil Derived Greases: A Comparative Tribological Investigation."
- UBA Research Project Grant – Awarded a research project grant of Rs.80000/- for the project "Solar Photovoltaic Bubble Dryer" under the Renewable Energy Scheme (RES) of Unnat Bharat Abhiyaan, Govt. of India. This project is implemented for the Edakkattuvayal Grama Panchayat, Ernakulam district, Kerala
- Publication of an Indian patent: The Department of Information Technology is proud to present the successful publication of an Indian patent for a groundbreaking invention: An autonomous system for managing water hyacinths. This innovative solution leverages advanced technologies like computer vision, artificial intelligence, and the Internet of Things to tackle a critical environmental challenge. Developed by dedicated students and faculty
- *Kerala state level Second Prize* at *IEEE Day PES Quiz*: first-year B.Tech Computer Science student **FestinBiju** for securing the K*erala state level SecondPrize* (First prize in Kochi Hub Level) at the *IEEE Day PES Quiz* organized by IEEE PES Kerala Chapter. The event, hosted by Cochin University of Science and Technology on November 4, 2023, signifies our commitment to nurturing excellence and innovation among students
- Akhil P S (CSE 2021-'25), the Co-founder of Finity Tech Craft, has achieved remarkable success with his innovative mobile app
- EZ CRUIZE: student-designed electric buggy, EZ CRUIZE, to Graceland Foundation was a resounding success
- Success in ISRO Robotics Challenge – URSC 2024
- The students from Toc H have achieved remarkable success in the ISRO Robotics Challenge – URSC 2024 at the National level.
- The projects "SkySentinel" developed by final-year students of Robotics and Automation, and "NeuroNav Chair" developed by final-year students of Electronics and Communication Engineering , were selected for presentation at the KTU stall during Keraleeyam 2023 at Thiruvananthapuram from November 1st to November 7th, 2023.
- Outstanding Achievement at "SAMAGRA" – The Project Expo" The project "NeuroNav Chair" ,by final year students of ECE (2020-24' Batch) showcasing

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innovative design and technological prowess, has rightfully earned the title of the Winner at SAMAGRA – The Project Expo held at Adi Shankara Institute of Technology on March 1st, 2024

- Ms. Malavika Narayanan for her remarkable achievement in receiving the Grace Hopper Celebration (GHC) Scholarship from AnitaB.org.
- Ms. Liya Shaji (B.Tech CSE 2021-'25) was selected as the Google Developer Student Club Lead for the Campus, for the 2023-'24 academic year.

vi) Problems Encountered

- Governmental funds for training and research from state/central agencies restricted, being self-financing institute.
- Delayed disbursement of research funds by funding agencies
- Stake holders overburdened by vast curriculum requirements
- Plenty of generated ideas but few takers in the market