



SUSTAINABLE ENGINEERING PRACTICES

ONE DAY PARTICIPATORY LEARNING AND FIELD STUDY PROGRAMME @TIES FOR ENGINEERING AND ARCHITECTURE STUDENTS

- EXPERIENTIAL LEARNING SESSIONS FOR INCORPORATING SUSTAINABILITY CONCEPTS
- EYE OPENING TO ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) & SUSTAINABLE DEVELOPMENT GOALS (SDG) RELATED TO ENGINEERING FIELD
- CUSTOMISED PACKAGES FOR EVERY STREAM OF ENGINEERING- MECHANICAL, CIVIL, CHEMICAL, EC, EEE, CSE, IT, etc.- SYLLABUS LINKED.

Division of Environmental engineering, TIES, offers state of the art training for engineering and architecture students on sustainability. TIES is an approved research centre of Mahatma Gandhi University in Environmental and Atmospheric Sciences.

TIES NATURALS SHOP FOR NATURE

Books, field guides, CDs, and other eco-friendly products of TIES, and farm products like mushroom, mushroom spawn, honey, trekking kits, snake rescue kits, etc. are available for sale.
Visit our sales counter or
you can shop online: https://ties.org.in/Shop/FARMPRODUCTS or
https://onehealtheco.com/shop-2/

BOOK IN ADVANCE

Those who wish to participate should reserve the dates in advance over phone or e mail.

REGISTRATION FEE

Fees: Rs.200/- per student. Free for 1-2 accompanying faculty (Seminar kit including pad, pencil, brochures etc.; morning and evening tea, will be provided. Lunch will be provided on additional payment-register in advance).

ALL PARTICIPANTS WILL GET TRAINING CERTIFICATES

PLEASE CONTACT

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For more details & registration:
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All communications shall be sent to:
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Sustainable Engineering Practices (ODT)
Tropical Institute of Ecological Sciences (TIES)
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Kerala, India.
Email : info@ties.org.in

TIES Location

TROPICAL INSTITUTE OF ECOLOGICAL SCIENCES

www.ties.org.in
ISO 9001:2015; ISO 17020:2012
certified organization

TIES

Welcome to the fascinating world of environmental sustainability...!

The "Sustainable Engineering Practices" is a training program designed to introduce Engineering and Architecture students to the principles and practices of environmental sustainability. This hands-on, interactive session aims to equip students with the knowledge and skills needed to incorporate sustainability into their engineering projects, professional practices and lifestyle. Understanding environmental sustainability is not just a trend but a necessity in today's world where the challenges of climate change, resource depletion, and pollution demand urgent attention and action.

What is Environmental Sustainability?

Environmental sustainability refers to the responsible interaction with the environment to ensure that current and future generations can meet their needs without compromising the ability of future generations to meet theirs. It involves finding a balance between meeting our economic, social, and environmental needs without depleting natural resources and causing irreparable harm to ecosystems. The strategies and actions of the world are in tune with the Sustainable Development Goals (SDGs) which were adopted by the UN in 2015 as the 2030 agenda for Sustainable Development.

Why it is important for Engineers or Architects

Integration of SD principles in all streams of engineering is essential for creating a more resilient, equitable, and environmentally responsible future. Hence Engineers and Architects have a crucial role in the focal areas of Sustainable Development:

Energy Conservation and Management: The need for conserving and creating new sources of energy is most important in the present times. Engineers play a critical role in energy conservation and management, driving innovation, efficiency, and sustainability across various sectors

Water Conservation and Management: Engineers play a crucial role in conserving and managing water resources sustainably. They can merge sustainability in design and management of water supply system, wastewater treatment system, and smart water technologies.

Landscape Design & Natural Resources Management: Engineers can do sustainable landscape design by integrating technical expertise with environmental considerations to create functional, aesthetically pleasing, and environmentally friendly outdoor spaces. Sustainable engineering practices focus on optimizing resource use, reducing waste, and improving energy efficiency. This not only benefits the environment but also leads to cost savings and innovation.

Waste Management: The need of sustainable waste management by designing, implementing, and optimizing systems that reduce waste generation, promote recycling and reuse, and minimize environmental impact is well understood

Climate Change – Mitigation & Adaptation: Climate change has become one of the most pressing challenges of our time, with its impacts being felt across the globe. Engineers play a vital role in developing sustainable solutions, implementing innovative technologies, and designing resilient infrastructure to combat climate change and its far-reaching consequences.

Occupation Health & Safety: Many environmental issues directly impact public health and safety. Engineers can contribute by developing solutions that reduce pollution, improve water quality, and create healthier living environments. Effective engineering interventions are a priority in continuously changing occupational environments, particularly in companies struggling to manage health and safety in the workplace.

OBJECTIVES

- To make the students aware of sustainability in engineering practices
- To impart the technique of participatory and interactive learning
- To showcase real world examples of sustainable engineering projects
- To encourage open dialogue to exchange ideas and perspectives on sustainability challenges
- To make the students aware of our rich natural heritage and need of conservation
- To orient youngsters towards sustainable lifestyles

EXPECTED OUTPUT

- Understanding of sustainability concepts
- Familiarization of sustainable engineering practices like LCA, green designs, renewable energy etc.
- Understanding environmental regulations and standards
- Critical thinking, social thinking
- Collaboration and team work and communication
- Ethical awareness environmental consciousness
- Integration of sustainable practices in engineering projects
- Continuous learning

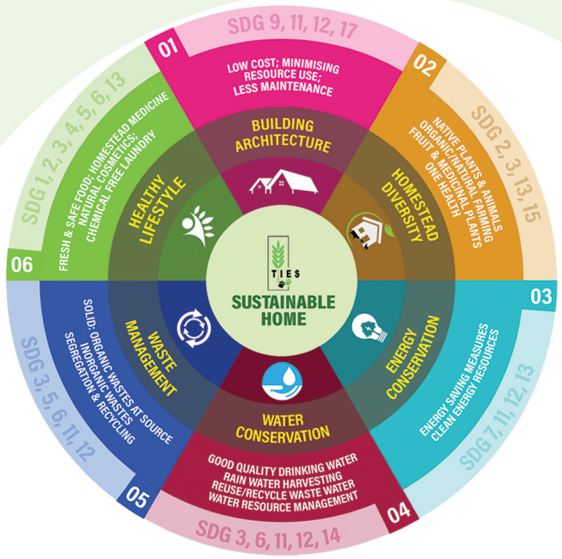
Who all can attend the training?

Students of any engineering disciplines/ Architecture. One batch consisting of 30-70 numbers of students either from a single stream or as mixed of a college is good.

One batch should be of minimum 30 students and maximum 80 students.
1-2 teachers may be permitted with each batch.

Pre-requirement for the programme:

Basic knowledge about Sustainable Development (SD) and Sustainable Development Goals (SDGs).
Students are requested to bring your laptop/mobile phone for making the power point presentation and presenting the same.



TYPICAL DAYS ITINERARY

09.30 am : Registration
10.00 am : Welcome note
10.15 am : Orientation Class – TIES
11.00 am : Tea Break
11.10 am : Class on Sustainability/ Sustainable Engineering
12.10 pm : TIES Campus Walk/ Lab visits (Thematic groups for Functional Elements of TIES Campus)
01.00 pm : Lunch Break
01.45 pm : Presentation by the member groups (Power Point Presentation)
02.45 pm : Idea pitching based on Sustainable Engineering
03.30 pm : Valedictory Function & Certificate Distribution
04.00 pm : National Anthem

Optional : Visit to *Naalumanikkattu*- India's First Village roadside Eco-tourism Project - A TIES Project (4.5 kms. from TIES)