భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్ भारतीय प्रौद्योगिकी संस्थान हैदराबाद Indian Institute of Technology Hyderabad

> Greenko School of Sustainability Placement Brochure 2024 - 25

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Chairman's Message

"As you are well aware, the Greenko School of Sustainability was established in 2022 as a pioneering institution dedicated to fostering excellence in Sustainable Science and Technology education. The school is the first in India to offer specific master's level programs on sustainability. The school offers master's programs in Sustainable Engineering, Energy Science and Technology, and E-waste Resource Engineering and Management.

It is with great pleasure that I introduce our distinguished graduates, who embody the fusion of theoretical knowledge and practical skills essential for success in today's rapidly evolving professional landscape. At the Greenko School of Sustainability, we are committed to cultivating individuals who demonstrate academic prowess and showcase creativity, innovation, and a steadfast dedication to excellence.

Our graduates are uniquely equipped with the adaptability and resilience required to thrive across diverse professional domains. Our meticulously crafted curriculum not only meets rigorous industry standards but also emphasizes holistic development, ensuring our graduates are poised to make meaningful contributions from their first day onward.

I encourage you to explore the exceptional capabilities of our graduates and consider them for opportunities within your esteemed organizations. Together, let us forge a future where talent meets opportunity, driving sustainable progress and innovation."



Dr. Sireesh Saride Chairperson GSS Department of Civil Engineering IIT Hyderabad Email: <u>chair@gss.iith.ac.in</u>

Message from Faculty Coordinators

"Energy is crucial to the global economy, necessitating continuous, affordable power. To support India's National Electric Mobility Mission Plan 2020, which aims for 40 crore hybrid and electric vehicle users and 500 GW of renewable energy capacity by 2030, IIT Hyderabad launched an interdisciplinary M.Tech program in "Energy Science and Technology (EST)" in 2020. This program equips students from diverse backgrounds with advanced knowledge in energy principles, integration, and device development, preparing them for careers in academia and industry. As the program coordinator, I am dedicated to providing a productive learning experience and warmly welcome potential applicants to join us in revolutionizing the future of energy."



FC: Energy Science & Technology Dr. Surendra Kumar Martha Department of Chemistry IIT Hyderabad Email: <u>fic.mtech.est@iith.ac.in</u>

"The Sustainable Engineering program at the Greenko School of Sustainability integrates interdisciplinary knowledge, focusing on sustainable infrastructure, energy systems, and industrial processes. Our curriculum addresses key issues such as climate change mitigation, renewable energy, carbon capture, sustainable mobility, and circular economy principles, enriched with hands-on projects and industry lectures. Our strong industry partnerships, like the one with Greenko Group, ensure our students gain practical skills and insights relevant to today's sustainability challenges. Graduates emerge well-rounded, equipped with essential soft skills and a commitment to driving sustainability initiatives. As a pioneering program in India, we aim to be among the top ten alobally in sustainability research and education within the next decade. Join us to lead in sustainability and make a meaningful impact on the world."



FC: Sustainable Engineering Dr. Sayak Banerjee Department of MAE IIT Hyderabad Email: <u>sayakb@mae.lith.ac.in</u>

"The rapid growth in technology has led to increased electronic waste, requiring efficient and sustainable management solutions. To address this, the Ministry of Environment, Forest, and Climate Change of India introduced the E-waste (Management and Handling) Rules in 2011. In response, IIT Hyderabad and CMET Hyderabad launched the M. Tech program "E-Waste Resource Engineering and Management (EWRM)" in 2020, first of its kind in the world. This interdisciplinary program covers e-waste management, metal recycling through pyro and hydrometallurgical routes, supply chain management, ML applications and more, offering practical experience through CMET. As the program coordinator, I invite recruiters to consider our students for potential positions and wish them success in their future endeavors."



FC: E- Waste Resource Engg & Mngmt Dr. Ashok Kamaraj Department of MSME IIT Hyderabad Email: <u>fic.mtech.erem@iith.ac.in</u>



Dr. Pradeep Kumar Yemula Faculty Placement Coordinator GSS Department of Electrical Engineering IIT Hyderabad Email: <u>ypradeep@ee.iith.ac.in</u>

Faculty Placement Coordinator's Message

"The Greenko School of Sustainability (GSS) at IIT *Hyderabad* offers interdisciplinary programs in Sustainable Engineering, Energy Science and Technology, and E-Waste Resource Engineering and Management. Our rigorous curriculum, hands-on projects, and cutting-edge research provide students with practical experience and innovative problem-solving skills. Strong industry partnerships ensure our graduates are highly employable, equipped with both technical expertise and essential soft skills like communication and teamwork. Hire our passionate graduates to drive sustainability initiatives and contribute to your organization's success."

Introduction

Greenko Group and IIT Hyderabad collaborated to establish the Greenko School of Sustainability at the Indian Institute of Technology Hyderabad. The School of Sustainability is designed to shape a world that harmonizes with nature and empowers future generations toward a more sustainable tomorrow.

The Greenko School of Sustainability is structured as a cross-disciplinary centre that manages seamless participation and knowledge flow from all existing departments of IIT Hyderabad.

The School offers three distinct inter-disciplinary two-year M.Tech programs in:

- Sustainable Engineering
- Energy Science and Technology
- •E-Waste Resource Engineering and Management

These programs are crafted to meet the specific sustainability aspects of climate, energy, and e-waste management.

Why Recruit us

Interdisciplinary Expertise:

Graduates possess a holistic understanding of sustainability challenges and solutions, combining knowledge from engineering, technology, environmental science, and management.

- Sustainable Engineering:

Focus on infrastructure, energy systems, and industrial processes.

Energy Science and Technology:

Emphasis on renewable energy, energy storage, and energy management.

E-Waste Resource Engineering and Management

Expertise in e-waste recycling, resource recovery, and sustainable supply chain management.

Industry-Relevant Curriculum

Courses address real-world sustainability issues like renewable energy, climate change mitigation, circular economy principles, industry optimization, carbon capture, waste management, and sustainable mobility.

Practical Experience

Hands-on projects, industry lectures, and lab work provide practical skills and exposure to real-world challenges.

Cutting-Edge Research

Involvement in groundbreaking research ensures students stay at the forefront of technological advancements and innovative solutions.

Commitment to Sustainability

Graduates are passionate and committed to driving sustainability initiatives, aligned with our mission for net-zero energy solutions.

Pioneering Programs

Our Sustainable Engineering and E-Waste Engineering programs are the first of their kind in India, leading the way in sustainability education and research.





Batch Skills Profile



Programs Offered

Energy Science & Technology

Sustainable Engineering

The Master of Technology (M.Tech) program in Energy Science and Technology is an interdisciplinary course that focuses on the comprehensive study of energy production, storage, and distribution. This unique program features a cutting-edge curriculum that integrates subjects from various disciplines. The course is delivered by distinguished faculty members from multiple departments, including Chemistry, Chemical Engineering, Computer Science Electrical Engineering, Engineering, Materials Science, Mechanical Engineering, and Physics.

The department addresses a wide range of areas, from Battery Management and Analysis Techniques to Sustainability and beyond. This program ensures that students receive a holistic education, equipping them with the knowledge and skills necessary to excel in the dynamic field of energy science and technology. The pioneer batch of the M.Tech in Sustainable Engineering at the Greenko School of Sustainability, IIT Hyderabad, represents a significant milestone in advancing environmental stewardship and sustainable development.

This innovative, interdisciplinary program equips graduates with cutting-edge expertise in crucial areas such as energy transition, industry transformation, climate change mitigation, and the circular economy. Students are trained in recycling, reuse, repurposing, and refurbishing, alongside advanced topics like AI and space technologies for climate change mitigation, green chemistry, optimization and net zero and net negative industrial clusters.

These graduates bring a unique blend of pioneering knowledge and practical skills, making them exceptionally valuable to organizations dedicated to sustainability and environmental impact

E-Waste Resource Engg. & Mngmt.

The M.Tech in F-Waste Resource Engineering & Management is the first of its kind in the country, offered by the Greenko School of Sustainability at IIT Hyderabad in collaboration with C-MET. This interdisciplinary program emphasizes the principles of the circular economy, focusing on sustainable resource recovery and innovative recycling technologies. It integrates environmental science. engineering, and management, covering critical areas such as metal recycling technology, supply chain logistics, and machine learning applications in e-waste management.

By supporting government initiatives like Swachh Skill India. Bharat. and Waste-to-Wealth, the program prepares graduates to implement sustainable practices and drive technological advancements in the field of e-waste resource management.

En

Course Curriculum

ENERGY SCIENCE & TECHNOLOGY

SKILLS



COURSE BASKET



EST - Batch '25



Alan Sam BTech - Electrical Engg. Research Area - Net Zero Emission Buildings Interest Areas - NZEB,

Sustainability Reporting, Urban Planning & Climate Action



Kabir Gupta BTech - Mechanical Engg. Research Area - 3-Dimensional Cell Design Interest Areas - Hydrogen Production,PVT, ML, Lithium ion batteries.



Purva Warke B.E. - Mechanical Engg. Research Area - Electro -Chemical Modeling Interest Areas - Li-ion batteries, EV, PVT, Multiphysics Modeling, Python, BMS



Surajit Middya

BTech - Mechanical Engg. Research Area - Fast charging Methods for Li - Ion Battery Interest Areas - EVT, DS, AI/ML in Renewable Energy, BMS, CFD, Li-ion Batteries



G Vijender BTech - Electrical

BTech - Electrical Engg. Research Area - Battery Management Systems for H.V. Interest Areas - BMS for HV, EVT, Li - ion Batteries, PV, Power Converters



Himanshu Prasad

BTech - Mechanical Engg. Research Area - Metal (Li,Na,K) - CO2 battery Interest Areas - Organic & Perovskite, Li-Ion Batteries, FEM, Fuel Cells, EVT, PV



Arjit Dubey

BTech - Electrical Engg. Research Area - Battery Management Systems for H.V. Interest Areas - Battery Management system, Thermal, Solar Power Plant , EVT



Ayush Singh BTech - Mechanical Engg. Research Area - Metal (Sodium) - Sulfur Battery Interest Areas - Li-Ion Battery, EVT, BMS, Financial Market, Python Programming



Prabhakar Maurya BTech - Mechanical Engg. Research Area - Reactor Sim. for Coal Gasification using CFD Interest Areas - Cell Modelling

& Simulation, BTMS, CFD, EV, Fuel Cell Tech, Na - ion Batteries

COURSE BASKET



SUSTAINABLE ENGINEERING

A DEPARTMENT OF A CAMERING







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SE - Batch '25



Abhishek

BTech - Mechanical Engg. Research Area - Analyzing Weather Data using Advanced Machine Learning Techniques Interest Areas - ML & Data Science, Optimization in Sustainable Energy Technologies



L. Chandana Bai BTech - Chemical Engg. Research Area - High entropy oxides based catalysts for Hydrogen evolution reaction. Interest Areas - Green Hydrogen, CCUS, Waste Management, Sustainability Analysis



Satyajeet Singh B.Tech. - Mechanical Enga. Research Area - ML Modelling for predicting EV Adoption Interest Areas - ML & Data Science, Sustainable Energy & Mobility, Optimization

Panse Manasi M

B.Arch. Research Area - Sustainability Assessment of Solid Waste Management. Interest Areas - Green Infrastructure, Sustainability, Waste Management, GIS

Sanika Palnitkar B.Arch Research Area - Adsorption **Cooling System** Interest Areas - Adsorption systems, low energy cooling systems, sustainable Infrastructure



Subhajit Das B.Tech - Leather Technology. Research Area - Development of stable electrode-catalyst for HER Interest Areas - CCUS, Alternate fuels, sustainable analysis, waste management, LCA



Shovan Jana BTech - Mechanical Enga. Research Area - ML Modelling of **Biomass Gasification** Interest Areas - ML & Data Science, Optimization,

Sustainability, Renewable Energy

Vishal S B.E - Civil Engg. Research Area - Sustainability Analysis of Agriculture Interest Areas - Sustainability Analysis & LCA, Sustainable

Infrastructure, Sustainable Mobility, Waste Management



Shruti Saumya B.Arch

Research Area - Optimized Water Management for Sustainable Infrastructure using ML Interest Areas - Data Science, Resource Optimization, Sustainable Infrastructure and Energy

E - WASTE RESOURCE ENGG. & MANAGEMENT

K

Keras

Power BI

SKILLS

openLca

GactSage"

TensorFlow

COURSE BASKET

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EWRM- Batch '25



Chetan

B.E. in Civil Engineering Research Area - Life Cycle Analysis of Solar Panel recycling Interest Areas - LCA, Sustainability and circular economy, ML, Data Science & Analytics



Patreesh Srivastava

B. Tech, Civil Engineering Research Area - Supply Chain Analytics and Optimization in E waste using Python Interest Areas - Supply chain management , Data Analytics , optimization and operations management

SI B. Re ch E-

Sri Nandhini

B. Tech, Energy and Env. Engg. **Research Area** - Bio-physico chemical leaching of metals from E-waste

Interest Areas - Hydrometallurgy, Biometallurgy, LCA, Closed loop recycling, Sustainable recycling

Thesna Beevi

B. Tech, EEE Research Area - Predicting lifespan of lithium ion battery using ML

Interest Areas - Pyrometallurgy, LCA, Sustainable engineering,Li-ion, Supply chain management, AI/ML, Data Analytics , Automation



Vaibhav Karankal

B.E. in Mechanical Engineering Research Area - Reverse logistics network design and analysis for managing E-waste shipments. Interest Areas - Supply chain, Operations, Logistics, Inventory Analysis, Network Optimization, Data Analytics, AI/ML, Automation



Tank Viraj Harsukhbhai

B. Tech, Mechanical Engineering Research Area -Sustainable recycling of e-waste to recover metal values.

Interest Areas - PYROMETALLURGY, FINANCE, QUANTITATIVE FINANCE, High-Frequency Trading, DATA SCIENCE IN INVESTMENT Mngmnt



Yashwanth Munavath

B. E, Civil Engineering Research Area - E - waste processing via metallurgical route using induction furnace Interest Areas - Pyrometallurgy, Supply chain Mngmnt, LCA, AI/ML, Data Analytics, digital marketing



Yumnam Yoihensana

B. Tech, Civil Engineering Research Area - Optimizing E-Waste recycling Supply chain using ML

Interest Areas - Pyrometallurgy, LCA, Sustainable recycling, AI/ML, Data Science, Supply chain Mngmt, Optimization

Faculty

Prof. Chandra Shekhar Sharma Dean & Professor Chemical Engineering



Prof. K Siva Kumar Professor Electrical Engineering



Prof. Surendra Kumar Martha Head(Che) & Professor Chemistry



Prof. Sireesh Saride Professor Civil Engineering



Prof.Sushmee Badhulika Professor Electrical Engineering



Prof. KVL Subramaniam Professor Civil Engineering

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Prof. Satyanarayana G. Professor Chemistry



Prof. Raja Banerje Professor M & AE



Prof. Mahendrakumar M Professor Civil Engineering



Prof. Subrahmanyam Ch Professor Chemical Engineering



Prof. Suhash Ranjan Dey Head(MS) & Professor MSME, CC



Dr.Pradeep Yemula Associate Professor Electrical Engineering



Prof. Kishalay Mitra Head(CH) & Professor AI, CE & CC



Prof. Sathya Per Professor CSE, AI & CC



Prof. Deepa Menon Professor Chemical Engineering

Faculty



Assistant Professor Chemistry



Dr.Sai Santosh Kumar Raavi Associate Professor Physics



Dr. Debaprasad Shee Associate Professor Chemical Engineering



Dr. Kishore Natte Assistant Professor Chemistry



Dr. Nithyanandan Kanagaraj Assistant Professor Physics



Dr. Atul Deshpande Assistant Professor MSME



Dr. Narendra Kurra Assistant Professor Chemistry



Dr.Kaushik Nayak Associate Professor EE, CC & ES



Dr. Ashok Kamara Assistant Professor MSME



Dr. Ramkaran Patne Assistant Professor Chemical Engineering



Dr. Niranjan Shrinivas Ghaisas Assistant Professor M & AE



Dr. Deepu J Babu Assistant Professor MSME



Dr. Shiva Ji Assistant Professor Design, CC & HST



Dr. Sayak Banerjee Assistant Professor M & AE



Dr.Kaushik Nayak Head (ES) & Associate Professor Physics, Engineering Science

Faculty



Dr. Surendra Nadh Somala

Associate Professor

Civil Engineering

-2



Chemistry & CC



Dr. Maheswaran R

Assistant Professor

Civil Engineering

Dr. Debraj Bhattacharyya Associate Professor **Civil Engineering**



Dr. Pritha Chatterjee Assistant Professor Civil Engineering, CC





Dr. Shruti Upadhyaya Assistant Professor Civil Engineering



Dr. Venkata Rao Kotagiri Associate Professor Chemistry & ES



Assistant Professor **Civil Engineering**





Dr. Lohithaksha Maniraj Maiyar Assistant Professor E&M





Faculty @ CMET



Research Area's & Facilities

Laboratories and Research



.

Battery Testing Setup

Glove Box



Atomic Absorption Spectrometer GBC 9

BET



Cell Characterization

Physisorption



Cell Testing



Laboratories and Research



Student Initiatives & Activities

H 8 **Sustainability**



Generating Energy

Promoting Climate Friendly Transportation

> Enhancing Local Biodiversity

Pursuing Cutting-Edge Climate Research & Education

Seeding Climate Entrepreneurship & Leadership AERO Aeronautics and Drone Design Club

CEPHEID The Astronomy and Astrophysics Club

ELEKTRONICA The Electronics & Signal Processing Club

EPOCH The AI-ML & Data Science Club

INFERO The Algorithmic and Logical Reasoning Club

KLUDGE The Information Security and Networking Club

LAMBDA The Dev Club

ROBOTIX The Robotics and Automation Club

TORQUE The Automobile Engineering and Design Club

GLITCH The Video Game Club

GDSC Google Developer Student Club

IIM

Indian Institute of Metals (IIM) Student Affiliate Chapter



Lecture Series



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Affiliation: Scania Group Speaker: Dr. Krishna Upadhyayula, Topic: Life Cycle Assessment as a Core **Competency in Corporate Environmental** Sustainability

Affiliation: Amazon.

Manager



Affiliation: Amara Raia Advanced Cell Technologies Pvt. Ltd. Speaker: Dr. EBENEZER D., Manager R&D Topic: Circular Economy Framework for India's Battery Industry Growth

Speaker: Saurabh Sohoney, Sr. Applied Science

Topic: AI in Amazon Logistics: From building

production ready models to using Gen AI



Affiliation: Verisk India Speaker: Raju Datla, Vice President and Srinivas Kondapalli, Senior Manager. Topic: Comprehensive Multi-Hazard Risk Financing Strategy for India



CARNEGIE

SCIENCE

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Affiliation: C-MET Hyderabad Speaker: Dr. R Ratheesh, Director Topic: Critical materials supply chain for semiconductor manufacturing

> Affiliation:CIS in Stanford Speaker: Dr. Tresa Thomas Topic: An investigation of the characteristics of monsoon low pressure systems in the present climate, their sensitivity to topography and CC.

amazon

Affiliation: GAIT Speaker: Srikanth Vavilla Topic: Harnessing Digital MRV and Voluntary Carbon Markets for Nature-Based Climate Solutions



Affiliation: Climate Policy Initiative Speaker: Mr. Hamza Abdullah Topic: The Adaptation Question: perspectives from Policy, Finance and the Political Economy



Affiliation: EMPRI 7F Speaker: Dr. Tejaswini Gowda & Rahul Agrawal Topic: Role of Tribological Solutions in Enhancing Efficiency and Reliability in the **Energy Sector**



Affiliation: The Good Ocean Speaker: Gabriella D'Cruz Topic: Current status and potential of India's seaweed industry



Affiliation: Grassroots Energy Speaker: Dr. Shyamali Topic: Bio-hydrogen Opportunities in India: An initiative by Grassroots Energy



Affiliation: IIT Bombay Speaker: Prof. Raghu Murtugudd Topic: Climate Science and Climate Solutions: What does India need?



Affiliation: Banvan Nation Speaker: Rashi Agrawal, Director **Topic: Circular Economy in Plastics: Opportunities in India**



Affiliation: Deakin Speaker: Dr. Anand Topic: Role of Tribological Solutions in Enhancing Efficiency and Reliability in the **Energy Sector**

Industrial Collaborations

प्रोडोगिकी संस्थान हेटा 29

Collaborations



AMARA RAJA Gotta be a better way













Past Recruiters



Past Recruiters



Meet the Team



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Thank You

Office of Career Services, IIT Hyderabad Visit us <u>@.https://ocs.iith.ac.in/</u> to know more about the registration process for recruitment. <u>office.placement@iith.ac.in</u>