

PRESS RELEASE

'E-Waste is not a Waste but Asset, IITH conducted orientation for 1st Batch of Mtech in E-waste Resource Engineering & Management.

'Need to move from Chain Economy to Circular Economy', said Shri Ajay Prakash Sawhney, Secretary, MeitY

Hyderabad, 1st September 2020: IIT Hyderabad has conducted virtual orientation for 1st Batch of Mtech in E-waste Resource Engineering & Management jointly offered by IITH & CMET on 31st Aug 2020. IIT Hyderabad has announced eight new Mtech Programs to commence from August 2020. Each of these Mtech Programs was preciously designed to cater to the need of Industries in collaboration of respective industry's experts like Additive Manufacturing, Energy Science and Technology, E-Waste Resource and Engineering Management, Integrated Sensor System, Network and Information Security, Polymers and Biosystems Engineering, Smart Mobility. For the first time, IITH enrolled Ph.D scholars in Entrepreneurship and Management. The classes for these new courses along with the classes for existing courses will commence from 1st September 2020. The Institute will also start functioning with 50% of staff effective from 2nd September 2020 on a rotational basis, baring a few those who reside in contaminated zones.

Welcoming dignitaries and students, Dr. Chandra Shekhar Sharma, Associate Professor, Department of Chemical Engineering, IITH and Course Coordinator Said, "This unique course on E-waste Resource Engineering & Management has attracted students from the different wing of engineering such as Civil, Electrical & Mechanical. These students will get the benefit of being jointly supervised by IITH & CMET and the program will also be supported by Ministry of Electronics and Information Technology (MeitY)".

With the rapid change in technology and more digitalization in the world, there is an explosive growth in the electronics industry and subsequently, that has led to enormous growth in electronic waste (e-waste). E-waste contains many hazardous and toxic substances which have serious health and environmental effects, if not managed properly. Therefore, it becomes essential to learn about various technological interventions to manage, reduce and recycle e-waste for its safe disposal.

Prof. B. S. Murty, Director, IIT Hyderabad in his opening remark said, "Co-existence of IITH & CMET in Hyderabad has been proved to be the boon. Around nine months back we have taken a step forward in this direction by signing an MoU with C-MET. The students will get practical learning from C-MET which will be equally complemented by theoretical knowledge by IITH's Academician. This will not be merely a course but will also provide an opportunity for the students to work on various industry-oriented problems and MeitY will play the role of catalyst in this."

This proposed M.Tech. program on E-waste management is not only very timely but also a very unique with joint participation from Centre for Materials for Electronics Technology (C-MET), Hyderabad. This M.Tech. program will first discuss the Waste management in general and e-waste management in particular including E-waste management rules. Various technologies for recycling of e-waste including the recovery of metals, plastics will be studied in detail followed by understanding life cycle analysis and carbon



footprint calculations. Chain and supply management including the role of the Artificial intelligence based techniques to develop an effective recycling system will also be covered. Few case studies will be taken in the seminar course while the thesis work will facilitate in developing new technological and viable solutions to meet the challenges in E-waste management.

Giving introduction of C-MET, Dr. B. B. Kale, Director General, C-MET said "CMET has started its unique centers in Hyderabad and Pune. At present we are doing 21 different projects at these centers which includes programs in energy generation, organic batteries and many more. We have recently supplied 2000 masks made with a special coating of nanoparticle on cotton fabric and is under clinical trial at different hospitals. Both of our facilities are working towards developing effective and economic technology for e-waste recycling and management. This Mtech program is the first academic collaboration of CMET and will be very useful to take this initiative forwards".

This M.Tech. program will catalyse the efforts towards E-waste management in the country and worldwide and will provide the necessary support for several Government initiatives in this direction such as Skill India, Swachh Bharat, Waste-to-Wealth initiatives.

Delivering Welcome remarks, Shri. Arvind Kumar, Group coordinator, MeitY said "India is the largest e-waste generator in Asia and among top five countries in the world. Picking-up e-waste from the garbage can lead to serious health hazards. Hence, MeitY has taken initiative to develop an ecosystem for the treatment of e-waste, its trading, recycling & recovering of the precious material and make new products. There is a great dearth of skilled manpower in this sector to develop and advance technology. This Course by IITH & CMET will help the industry in realizing and localizing the technology and MeitY endorses this Center of Excellence to develop resources, support economy and save the environment. We wish this program to be a great success."

Highlighting the need of e-waste recycling technology, Dr. N R Munirathnam, Former DG, C-MET said "It was in 2016, we first thought to have an engineering course in e-waste recycling and management. Thanks to Prof. Murty, a renowned metallurgist, this dream comes true today. This course will be an asset to develop eco-friendly and cost-effective technology. Seeded in IITH, this course will generate more jobs in future and recover more and more precious materials."

Emphasizing on the need to move to Circular Economy from Chain Economy, Chief Guest: Secretary, MeitY said "We are seeing now new changes that electronics is not standing, IT and other fields are equally accompanying it. Moving towards to Circular economy from Chain economy we have to see how to minimize the negative effects and maximize the positive effects of electronics. The technology is growing exponentially and the electronics is excelling in miniaturizing but with the increased use of electronics, working towards e-waste recycling is important. This unique curriculum with brilliant students, Academician from IITH, practical expertise of CMET will establish India in creating Circular economy."

Around 50 participants have joined this e-event which include Officials from MeitY, CMET, e-parisaraa, IITH and students joined this program. **Dr. Ratheesh Ravindran, Director, CMET Hyderabad** has concluded the Part – I event with 'votes of thanks.

In Part – II of the event, Dr. M. Narasimha, HoD, Chemical Engineering has given the opening remarks. Followed by a brief presentation by Dr. Sandeep Chatterjee, Director, MeitY on MeitY's initiatives on E-



waste awareness and management. Dr. Ratheesh Ravindran, Director, CMET Hyderabad has also given a presentation on C-MET and Highlight of E-waste technologies.

Dr. Chandra S. Sharma, Program Coordinator has shared Program Course Structure and Timetable Details with the instructors and students, followed by Introduction of All Faculty & Scientists associated with the program.

At the end of the Part-II of the event, students have also introduced themselves and had a Q&A session with the experts.

Please refer attached schedule & course's booklet for more details.

About IIT Hyderabad

Indian Institute of Technology Hyderabad (IITH) is one of the six new Indian Institutes of Technology established by the Government of India in 2008. In a short span of 12 years, the institute built on an imposing 570-acre campus and has been ranked among the top ten institutes for four consecutive years in the National Institute Ranking Framework (NIRF) released by the Ministry of Human Resource Development (MHRD), Government of India. The Institute was also ranked under Top #20 in the recent edition of Atal Ranking of Institutions on Innovation Achievements (ARIIA) introduced this year by MHRD to systematically rank all major higher educational institutions and universities in India on indicators related to 'Innovation and Entrepreneurship Development' among students and faculties.

IIT Hyderabad has close to 221 full-time faculty, 2,855 students of whom 20 per cent are women, nearly 200 state-of-the-art laboratories and five research and entrepreneurship centres. The Institute has a strong research focus with more than Rs. 500 crore of sanctioned research funding while PhD scholars account for about 30 per cent of total student strength. IITH students and faculty are at the forefront of innovation with more than 1,500 research publications and patent disclosures, 300 sponsored/ consultancy projects and 50 industry collaborations. IITH has MoUs with 50 universities in the U.S., Japan, Australia, Taiwan and Europe. IITH has been a pioneering change in pedagogy with fractal academic programs that atomizes course modules, encourage interdisciplinary learning, spanning innovative technology, fundamental science, liberal arts and creative arts like photography, theatre and painting.

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