



One-Week Training Program on “Sophisticated Instruments in Electronics Engineering” (23rd May – 29th May, 2022)

The Department of Science and Technology, Government of India, has given the responsibility to IIT (ISM) Dhanbad to build human resources and its knowledge capacity using open access science and technology infrastructure through the scheme "*Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI)*". In this regard, the Department of Electronics Engineering, IIT (ISM) Dhanbad, organized a one-week training program on "*Sophisticated Instruments in Electronics Engineering*" from 23rd May to 29th May, 2022 at IIT (ISM) Dhanbad.

This training program was coordinated by Prof. Jitendra Kumar, Department of Electronics Engineering, IIT (ISM) Dhanbad. This program includes thirty participants (Faculty/Research Scholar) from various universities/colleges in India, with no more than three from the same university/college.

Highlights of the Day-1 (Dated: 23rd May, 2022)

The first day of the training program began with a brief introduction to the program's purpose and significance. The introduction energized the participants' interest in science and engineering. The participants were then given a welcome kit that included a bag, a note pad, a power kit (pen, pencil, eraser, sharpener), and a program pamphlet.

Following that, two consecutive lectures were scheduled, with a relatively short tea break in between. The introduction and application of the Vector Network Analyzer (VNA) were the focus of these lectures. The first lecture (from 10:00 AM to 11:15 AM) was delivered by Dr. Preeti Kumari, Department of Electronics Engineering, IIT (ISM) Dhanbad and the second lecture (from 11:30 AM to 12:45 PM) was delivered by Mr. Madhu, Rohde and Schwartz.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) of the VNA was provided by Mr. Ankit Bhattacharya and Mr. Sourabh Santosh, Department of Electronics Engineering, IIT (ISM) Dhanbad.



Highlights of the Day-2 (Dated: 24th May, 2022)

On the second day, two lectures were given based on the Antenna Positioner System. The first lecture (from 10:00 AM to 11:15 AM) was delivered by Prof. Ravi Kumar Gangwar, Department of Electronics Engineering, IIT (ISM) Dhanbad and the second lecture (from 11:30 AM to 12:45 PM) was delivered by Mr. Gaurav Jindal, Applied Concept Group.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on Antenna Positioner System was provided by Mr. Kundan Kumar Suman and Miss. Tripta Kumari, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Highlights of the Day-3 (Dated: 25th May, 2022)

On the third day, two lectures were conducted based on the multiple-input-multiple-output (MIMO) Software Defined Radio (SDR). These two lectures (the first one from 10:00 AM to 11:15 AM and the second one from 11:30 AM to 12:45 PM) were delivered by Prof. Himanshu Mishra, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Following the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on MIMO SDR was provided by Prof. Himanshu Mishra, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Highlights of the Day-4 (Dated: 26th May, 2022)

On the fourth day, two lectures were given based on the Thin Film Thickness Profiler and Hall Measurement Setup. These two lectures (the first one from 10:00 AM to 11:15 AM and the second one from 11:30 AM to 12:45 PM) were delivered by Prof. Mukul Kumar Das, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on Thin Film Profiler and Hall Measurement Setup was provided by Prof. Mukul Kumar Das and Dr. S. S. Anwer, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Highlights of the Day-5 (Dated: 27th May, 2022)

Similarly, on the fifth day, two lectures were conducted based on the Electron Beam cum Thermal Evaporation System. These two lectures (the first one from 10:00 AM to 11:15 AM and the second



one from 11:30 AM to 12:45 PM) were delivered by Prof. Sanjeev K Raghuwanshi, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on an Electron Beam cum Thermal Evaporation System was provided by Prof. Sanjeev K Raghuwanshi and Mr. Azhar Shadab, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Highlights of the Day-6 (Dated: 28th May, 2022)

Similarly, on the sixth day, two lectures based on the Telecom Setup were given. These two lectures (the first one from 10:00 AM to 11:15 AM and the second one from 11:30 AM to 12:45 PM) were delivered by Prof. T. Jaisingh, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on the Telecom Setup was provided by Mr. Roshan Sharma, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Highlights of the Day-7 (Dated: 29th May, 2022)

Similarly, two lectures based on the BraggMETER were given on the seventh day (the last day of the training program). These two lectures (the first one from 10:00 AM to 11:15 AM and the second one from 11:30 AM to 12:45 PM) were delivered by Prof. Amitesh Kumar, Department of Electronics Engineering, IIT (ISM) Dhanbad.

Next, after the lunch break, a practical demonstration (from 2:00 PM to 5:00 PM) on the BraggMETER was provided by Mr. Randhir Sah, Department of Electronics Engineering, IIT (ISM) Dhanbad.

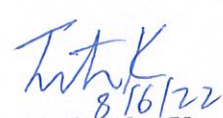
Following that, the certificate distribution took place, followed by a closing speech. Throughout the training programme, a formal discussion environment was established for the exchange of scientific and technological knowledge.


08/06/22

Prof. Ravi Kumar Gangwar
Co-Coordinator (STUTI)


08/06/22

Prof. Sagar Pal
Coordinator (STUTI)


8/16/22

Prof. Jitendra Kumar
Program Coordinator