

FIELD TRIP TO IIT (ISM) DHANBAD

ORGANIZED BY:
MTT-S IEEE ASANSOL ENGINEERING
COLLEGE STUDENT BRANCH CHAPTER

Branch Counselor: *Dr. Chittajit Sarkar (SM-IEEE)*

Branch Chair: *Mr. Biswajit Bose (Student member-IEEE)*

Faculty Coordinators: *Dr. Ashmi Chakraborty (SM-IEEE)*
Mr. Prajit Paul (Faculty member-IEEE)

IEEE Student Members:

1. **Asibur Rahman** - (ViceChair) - ECE
2. **Partha Sarathi Pal** - (Vice Chair) - ECE
3. **Deedhiti Dey** - (Secretary) - ECE
4. **Swarnali Mukherjee** - (Secretary) - ECE
5. **Ananya Ghosh** - (Treasurer) - ECE
6. **Prabal Chakraborty** - (Treasurer) - ECE
7. **Nilanjan Dutta** - (MTT-S IEEE Vice Chair) - ECE
8. **Komal Kumari** - ECE
9. **Rachna Tanti** - ECE

Date: **SEPTEMBER 22, 2023**

Venue: **IIT (ISM) DHANBAD**

Participants' Profile: -

A total of 42 students along with our Faculty Coordinator Dr. Ashmi Chakraborty and Mr. Prajit Paul participated in this one-day Field trip to IIT (ISM) DHANBAD.

Description about the program: -

It was a field trip organized by MTT-S IEEE Asansol Engineering College Student Branch Chapter to IIT (ISM) DHANBAD. The field trip was organized on the 22th of September, 2023. The mode of transport from Asansol to Dhanbad was by Varanasi MEMU Express. The boarding time from Asansol was 6:40 a.m. in the morning and the arrival time in Dhanbad was 8:10 a.m. in the morning.

Upon our arrival at the ISM Dhanbad campus, we were initially escorted to the NVCTI building, which stands for the Naresh Vashisht Centre for Tinkering & Innovation.

We initiated our journey by visiting the Electronic and IoT Lab, where we immersed ourselves in the realm of electronics and the Internet of Things (IoT). During our time in the lab, we had the opportunity to observe various machines which are used in different industry level expertise. Additionally, we encountered various components, including different types of Arduino boards, Sonar sensors, and digital display boards of high cost, and the most important microprocessor – RASPBERRY PI. This enriching experience significantly enhanced our comprehension of contemporary electronics and IoT technologies. Furthermore, in these labs, we not only delved into the intricacies of drone manufacturing but also gained valuable insights into their operation and applications. In these labs, various students from different schools collaborated on numerous small projects. Additionally, sir took the initiative to explain some project's creation and practical applications to the rest of the group. This collaborative environment fostered a rich exchange of ideas and knowledge, enhancing our overall learning experience.

During our visit to the second lab, which was dedicated to 3-D printing, we gained valuable insights into the process of creating specific 3-D objects. We had the opportunity to observe and learn about three different types of 3-D printing machines. Our teacher went the extra mile by demonstrating the live printing process directly from one of the 3D printers, offering us a firsthand experience of how objects take shape layer by layer in real-time. This practical demonstration significantly enhanced our comprehension of the 3D printing workflow. Notably, within this lab, we were introduced to a multitude of projects completed by fellow students, where 3-D printers played a pivotal role in bringing their creations to life. Our teacher's proactive involvement in explaining these projects further enriched our understanding of the innovative possibilities that 3-D printing technology offers.

During our third lab visit, we explored the Robotics and Automation lab. There, we encountered various machines and setups, including the Actuator Training Setup and the Sensor and IoT Training Setup, both of which were supplied by the German company BECKHOFF. Additionally, we had the opportunity to observe a Hexapod Robot Kit and learn about pneumatic and electro-pneumatic machines. Our hosts provided detailed explanations about the functionality and applications of these machines.

We then visited the Department of Electronic Engineering, where **Prof. (Dr.) Shushrut Das** explained radiation patterns and the Anechoic chamber to us. Our visit led us to the remarkable anechoic chamber, meticulously engineered to create an environment where external sound finds no entry. At its core, the chamber boasts walls adorned with pyramid-shaped sound absorbers. These unique structures serve as the first line of defence against external noise, expertly dissipating and preventing any intrusion.

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MTT-S IEEE ASANSOL ENGINEERING
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Organises ----

Field Trip To ISM DHANBAD

**The more you
explore the more
you see, the
more you see,
the more you
learn.**



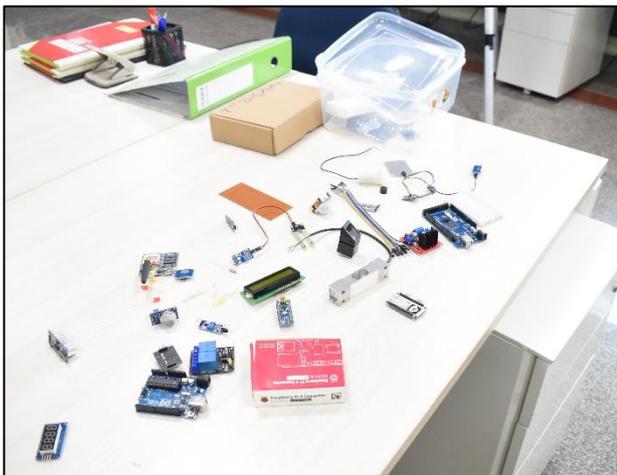
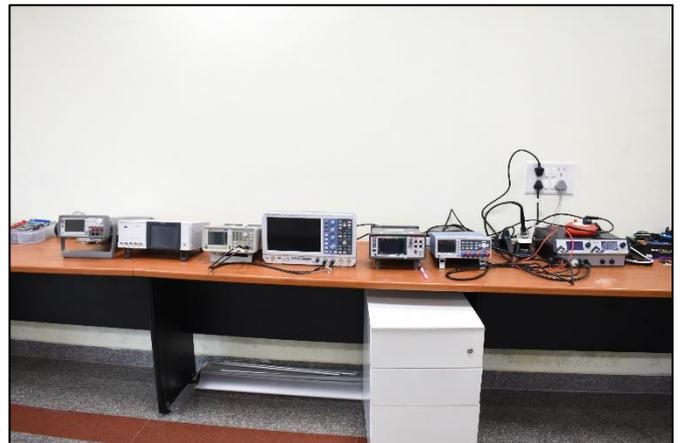
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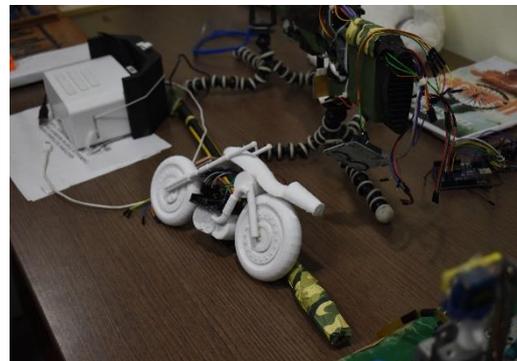
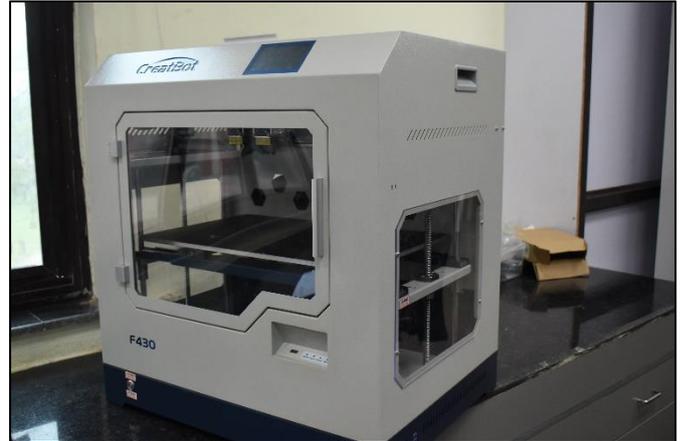
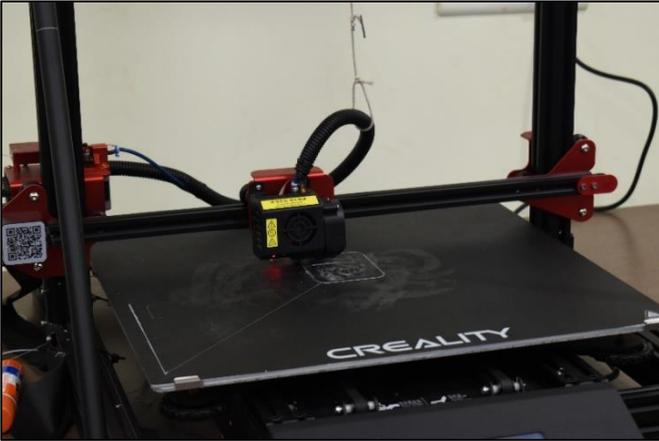
IIT ISM DHANBAD



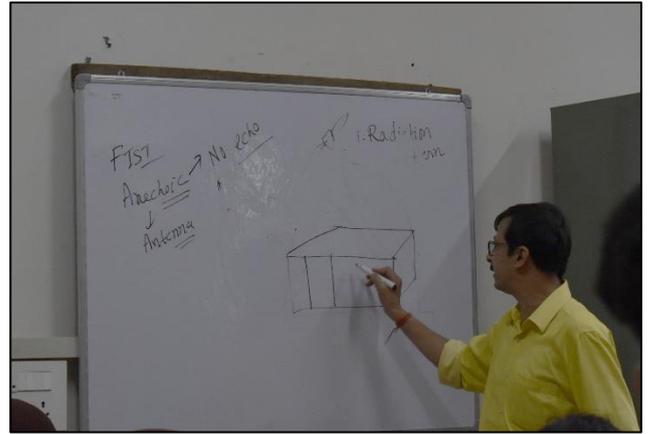
Naresh Vashisht Centre for Tinkering & Innovation.



***Different sensors, electronic components were demonstrated at NVCTI
(Electronics & IOT lab)***

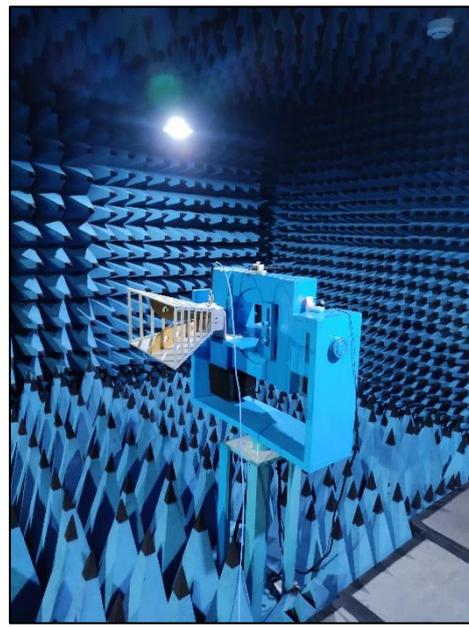
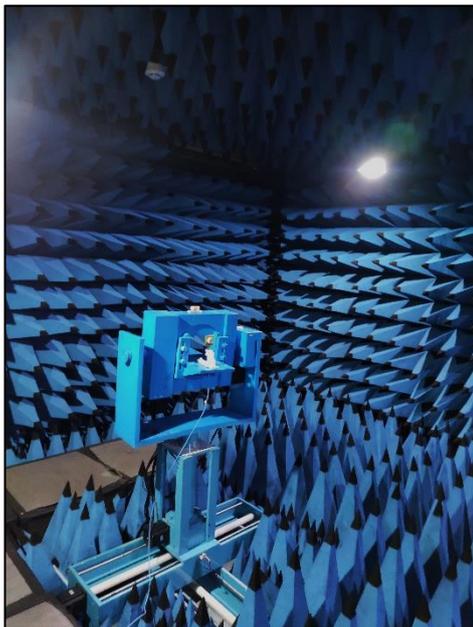


Demonstration on 3D printer and printing process (3D printing lab)



Prof. (Dr.) Shushrut Das demonstrating students regarding Anechoic Chamber elements and different parameters

THE ANECHOIC CHAMBER



PICTURE OF STUDENTS DURING FIELD TRIP



Participants' Profile: -

SL.no	Name	Year	IEEE Membership id
1	Disha Ghosh	2nd	99542323
2	Suranjan Sengupta	2nd	99542392
3	SRIJAN SINHA	2nd	99542347
4	Souvik Maity	2nd	99542457
5	Beetan Mukherjee	2nd	99542346
6	Nupur Das	2nd	99122866
7	Shreya Ghosh	2nd	99122862
7	Rudradeep Sen	3rd	99131309
8	Sampa bhagat	3rd	99126101
9	Nishu kumari	3rd	99126013
10	Muskan kumari	3rd	99128775
11	Aritra Chowdhury	3rd	99125585
12	Anket kumar singh	3rd	99129799
13	Shweta Sharma	3rd	98495462
14	Ananya Ghosh	3rd	98504247
15	Ritika Das	3rd	99122815
16	Sayan Mondal	3rd	99123421
17	Sweta Kumari	3rd	99542343
18	Surya Kiran Mukherjee	3rd	99122843
19	Anurag Banerjee	3rd	99122795
20	Priyanshu Chatterjee	3rd	99511168
21	Nilanjan Dutta	3rd	98504154
22	Syed Mehwish Jahan	3rd	99542663
23	Soumik Mazumdar	3rd	99122828
24	Deedhiti Dey	3rd	98413048
25	Subarna Sinha	3rd	99147086
26	Subhadeep Maity	3rd	98771422
27	Nikita Yadav	3rd	99126091
28	Adarsh Kumar Rajbhar	3rd	99148243
29	Riya singh	3rd	99125985
30	Anjali Kumari	3rd	99125959
31	Suchismita Banerjee	3rd	99123202
32	Komal Kumai	3rd	98412968
33	Gourav Kumar	3rd	
34	Amit Sen	3rd	99112450
35	Mohit Mukherjee	3rd	99122829

36	Shruti kumari	3rd	99125930
37	Rounak Kayal	3rd	99122801
38	Shweta Sharma	3rd	98495462
39	Sujoy Goshal	3rd	99122935
40	Rachna Tanti	3rd	98505020
41	Nishikant Gupta	3rd	99542473
42	Avrajit Singh	4th	99176900
43	Asibur Rahman	4th	98502444
44	Prabal Chakraborty	4th	98504183
45	Biswajit Bose	4th	98506278

CONCLUSION

In conclusion, our field trip to IIT (ISM) Dhanbad was an insightful and educational experience. During this visit, we had the opportunity to explore various labs and facilities, gaining practical knowledge in the fields of electronics, 3-D printing, and robotics. The Naresh Vashisht Centre for Tinkering & Innovation (NVCTI) provided us with a hands-on experience in the Electronic and IoT Lab, where we learned about the latest electronic devices and components, as well as the intricacies of drone manufacturing. In the 3-D printing lab, we witnessed the fascinating process of creating 3-D objects and were introduced to numerous student projects showcasing the versatility of 3-D printing technology. Our visit to the Robotics and Automation lab allowed us to understand the functionality of different machines and setups.

Additionally, our exploration led us to the Department of Electronic Engineering, where we were introduced to radiation patterns and the impressive anechoic chamber. This chamber, designed to eliminate external sound interference, featured pyramid-shaped sound absorbers that fascinated us with their innovative design.

Overall, this field trip was a valuable learning experience that broadened our understanding of contemporary technologies and their real-world applications. We are grateful to our hosts and instructors for their guidance and for kindling our interest in the fields of electronics, 3-D printing, and robotics. This visit has left a lasting impact on our knowledge and has motivated us to explore further in the realm of technology and innovation.

Dr. Chittajit Sarkar

(HOD ECE, IEEE STUDENT BRANCH COUNSELOR)