



**WINTER EDUCATION CAMP
STUDY TOUR**
Collaborative Academic Program



JIS Group Educational Initiatives had signed a Memorandum of Understanding with Asian Institute of Technology, Bangkok, to pursue, promote and reinforce cooperation in the common interests of teaching, training and research. The main objective of this union was to help the technologically rapt students pursuing their bachelor's degree in engineering to interact with qualified and committed professionals. The collaboration aims to foster advancement in training, teaching, research and cultural understanding.

Carrying forward this initiative, 2016 started with 17 students of NARULA INSTITUTE OF TECHNOLOGY (from EE, ECE, CSE, CE, ME and IT departments) selected through rigorous scrutiny and selection examination, getting the opportunity to explore this experience and knowledge at Asian Institution of Technology, Thailand. Two faculty members were to guide and support these students.

A report of this event has been compiled in the following pages.



2nd JANUARY 2016

At around 11am on the morning of 2nd January 2016, total forty students and two faculty members from GROUP started their journey from Netaji Subhash Chandra Bose International Airport, Kolkata India to Suvarnabhumi Airport, Bangkok, Thailand.

Our destination being Asian Institute of Technology, Thailand where an educational study tour was organised.



On reaching the institute we were warmly welcomed by Dr V RAJESH CHOWDHARY at the airport with a double decker bus for our comfortable journey to the institution. Since the day was coming to an end we were directly taken to have dinner at a snack bar inside the AIT campus after which we were escorted to Sirindhorn Science Home. Our stay for the next 13 days. Rooms were allotted and all the students were excited to explore the new place mostly because of its stunning view, homely feel and unlimited Wi-Fi facility, cycle on rent, swimming pool, spacious rooms and ample space for practices required by us in days to come.



3rd JANUARY 2016

The enthusiastic students started their day to the on house breakfast by AIT.

With energetic vibes and flare students then moved towards the Milton Bender Auditorium.

The schedule for the day started with an orientation program conducted by Prof. Nitin Kumar Tripathi who welcomed the students officially for the program and informed about all that was to take place for the next few camp days. A guide, brochures, exercise books and pens were given to students, complementary gifts from the institution.

Dr. V Rajesh Chowdhary brushed through few rules and regulations followed by AIT which was to be followed by the students for the days to come.

The session ended with a faculty speech delivered by Dr.KarabiGanguly and Mr Soumen Ghosh expressing their gratefulness.

This was followed by a tour around the AIT campus. Different blocks and the constructions on it were explained. The three different schools in AIT:

- School of Engineering and Technology (SET)
- School of Environment, Resources, and Development (SERD)
- School of Management (SOM)

Their functioning and achievements where discussed and the students were motivated to pursue further studies after the completion of their bachelor's degree.

The second session of the day after lunch was again conducted by Prof.Nitin Kumar Tripathi who gave the students an introduction to Geographical Information System (GIS). Its applications and usage.

After a tea break Ms.PriyankaKakria, a PhD pursuing student of AIT then delivered a presentation on Telemedicine, a field of her thesis and research and its potential applications in our society.

Question Answer rounds and fun facts quizzed the minds of all the students. Many students found the topic interesting and innovative.



4TH JANUARY 2016

This new day started on a technical note with the introduction of **Data Processing on Big Data** by **Dr. Apichon Witayangkurn**, Project Researcher, University of Tokyo, Japan and Visiting Sr. Research Specialist, RSGIS, AIT.

The core aspects of the lecture were based on the Four V's of Big data: Volume, Variety, Velocity and Veracity. Dr. Apichon started from the very basics of DATA and PROCESSING and thus his lecture was appreciated by all the students. Now the students were segregated into two groups. One comprising of CS, IT, ECE students (the CS track) and the other EE, CE, ME (the non-CS track)

After a tea break, the CS track students continued their session on Big Data while the non CS track students visited **The Habitech Centre** at AIT where the initiatives of **Dr. Gyanendra Staphitin** in the field of construction were shown- the

famous interlocking bricks. Its production, usefulness and economic status had been proven in many disaster prone areas. This new concept was of great knowledge for the civil engineering students and also an insight of future for the other department students.

Post lunch a hands on session was arranged for the CS track students. They were taken to the computer laboratory in the **RS-GIS department** accompanied by MR SOUMEN GHOSH. Tools used for big data processing such as MATLAB & HADOOP were made familiar to the students who were actually given the brief and experience of using the software.

On the other hand, a field visit was arranged for non-CS students at **Panyapiwat Institute** of Management (PIM). They were accompanied by Dr Karabi Ganguly.

Since it was a management based institute which worked with the CP GROUP, a renowned commercial company of Thailand running the well-known SEVEN ELEVEN stores; the students were imparted the knowledge of management and finance. Students actively participated in an interactive and games filled lecture lead by **Dr. Usanee Kulintornprasert, Mr. Derek Thitsanuthit**, and the rest of PIM Team whose main motive was to teach the importance of TEAMWORK

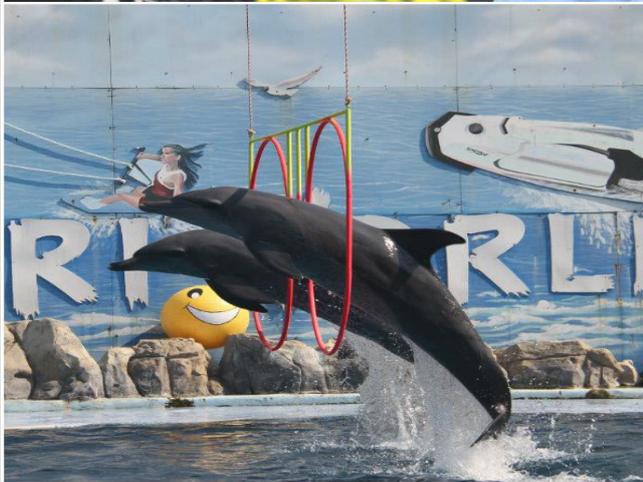


5TH JANUARY 2016

The fourth day schedule was a bit different than the usual. Breaking the monotonous routine of wearing their college uniforms, the forty scholars kept their books aside for a day of enjoyment with Mother Nature. **A VISIT TO THE SAFARI WORLD.**

From smart, trained sea lions to joyous elephant, from singing dolphins to action packed star wars they had the most captivating shows to entertain the audience. The AIT team treated us with an amazing buffet lunch at the Jungle Cruise Restaurant thereafter.





6th JANUARY 2016

After the usual breakfast routine, a technical session on **Machine Learning and Computer Vision** delivered by **Dr. Mathew Dailey** was organised for the day in the computer science building of AIT. **Augmented reality (AR)**, a live direct or indirect view of a physical, real-world environment whose elements are *augmented*, was the topic of discussion.

After a tea break another lecture on **Computer Graphics** by **Dr. Sumanta Guha** was carried on. The students were taught the use of computer generated images (CGI), texturing, 3D modelling and simulation. This session saw the active participation of students as Dr. Guha engaged everyone into mini quizzes.

Post lunch

There was again a division of class, one for the CS track and the other for the non-CS track.

For the non-CS track students a session by **Dr. Sohee Kim** was taken on **Urban & Environmental Management**.

The class was purely Asia centric. Sustainability of environment and the roles that present and future Megacities mainly in India which is an emerging economy play for urban growth and planning was discussed. Not only was verbal lecture conveyed but real time statistics were also shown. All in all Dr Sohee was capable of igniting the young minds of our students.

The other group had a hands on session of **Computer Graphics** with **Dr Sumanta Guha**. The fields in which Computer Graphics finds its application- Medical Imaging, Design and Simulation was deliberated. The Open GL library, its applications in Open Source GL, examples from projects done by AIT students and Web technology were the topics of interest. The students were even challenged by Professor to design a model of any planet and a satellite in orbit. To the professor's surprise all the students actively took part and even surpassed his expectations. An instance of delight and pleasure to the proud JIS group of its students.



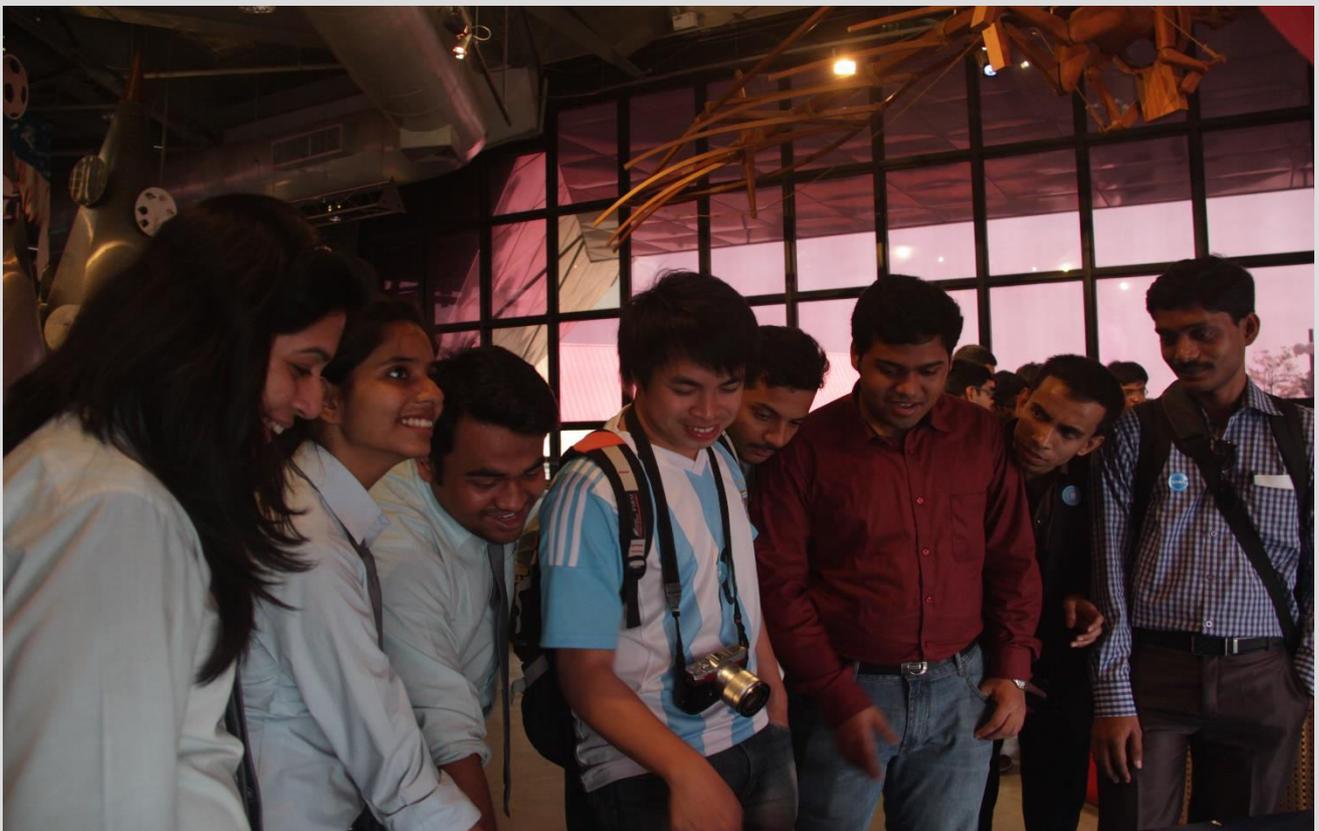
7th JANUARY 2016

Scheduled for a day of rather less technical seminars the students head out for another day with the same energy as ever before.

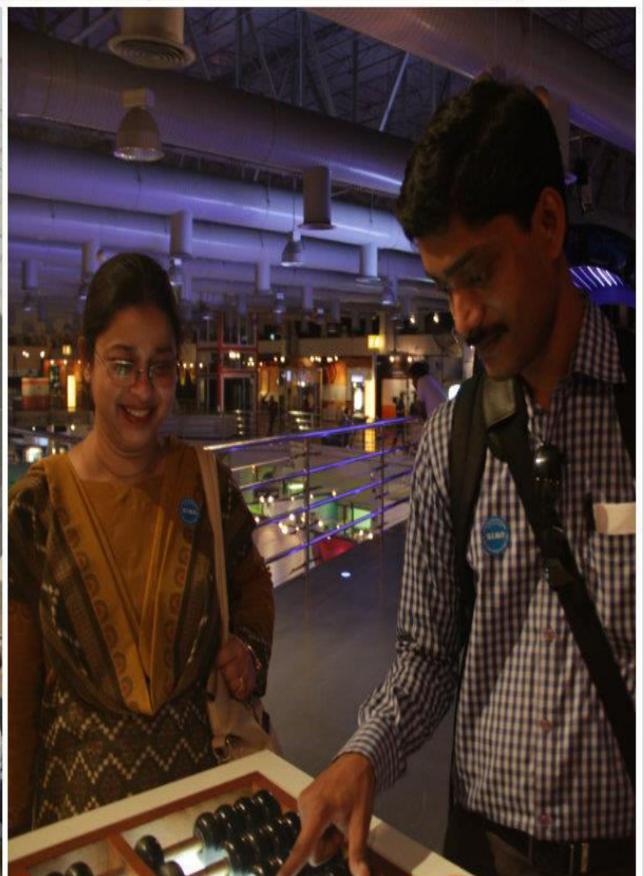
The first lecture of the day was taken by Prof. C Visvanathan whose topic of interest was Environmental Engineering and Management Programs. His research area was mainly the treatment of wastewater and the role played by membrane technology in it. New methods and ways of treating everyday water as well as rain water harvesting and its usefulness was discussed.

After a short break an important session on **HOW TO GIVE EFFECTIVE PRESENTATIONS** was given by Ms. Thaneesa Choombola. She discussed the importance of delivering speech, presenting oneself at important events, body languages and other physical and mental attributes that are necessary for survival in the corporate world. A fun session of selling an Ipad was also brought into action so as to bring out the creativeness in tech-savvy students.

After lunch, a visit to the **National Science Museum, Thailand!** Was what the students had been waiting for all day. From palaeontology to the traditions and cultures of Thailand, from latest gadgets to centuries old inventions and discoveries, from lasers to the sun's rays everything had a place of its own at this dreamland of exhibition hall.







8th JANUARY 2016

Location Based Services and real time geographical tracking and data extraction from devices on locations was the topic for the day. The overview was given by Mr. Saksin Sam Chongolnee, CEO, CCM Systems Company Ltd.

Not only did he deliver his lecture but Mr. Saksin also made sure that the students could grasp the knowledge well thus he distributed NFC chips after the lecture after a few pop up quizzes.

After a short break Dr. V Rajesh Choudhary delivered a speech on **GNSS: Global Navigation Satellite System**. He explained in detail about the use of Navigation technologies like RTK, GAGAN and IRNSS in fields of transportation, infrastructure planning and resource management during emergencies. The students were divided into groups and were given a task to implement the days lecture and to make maps of their colleges. The team with the best map were to be awarded on the final day.

It was then time for the **GPS Pack Rat game** and the teams were handed over a list of geographical coordinates and a GPS receiver. It was a fun filled game as we all scurried throughout the AIT campus to spot the exact location of the coordinates.

The second session for the day was headed by Mr. Amir Izhar who gave all of us a comprehensive overview on how to build **Google apps and other android based software**. The students were taught to design their own websites and applications on their own. The session was taken with great enthusiasm and dynamism.



9th JANUARY 2016

The technical session for the day took place at **Bangkok University** which is the oldest and largest private university in Thailand, established 1962.

Again the NON-CS track had a separate session. The highlights of the sessions included:

- Optical sensing using Nanotechnology
- Multispectral imaging for skin treatment
- Optical wireless communication

While the CS track students were taken to the communication lab in Bangkok University. The students were mentored by Dr. Poomphat. The students were introduced to the next generation of communication lab equipment. An in house coded FPGA board was used which was controlled by codes written by the faculty at the university. Various coding techniques used in digital communication such as PAM, PCM, PPM and PWM was introduced to the students.

While the students continued with their classes MR SOUMEN GHOSH AND DR. KARABI GANGULY paid a visit to THE INDIAN EMBASSY. A warm welcome awaited the teachers. Discussions on how this collaborative initiative has helped the students and how such programs should be conducted more often was a matter of interest. Also a detailed report of the program was given to the ambassador who showed keen interest into the matter. He was highly impressed and appreciative of the fact that these Indian students were taking this opportunity given to them with such zest and zeal.



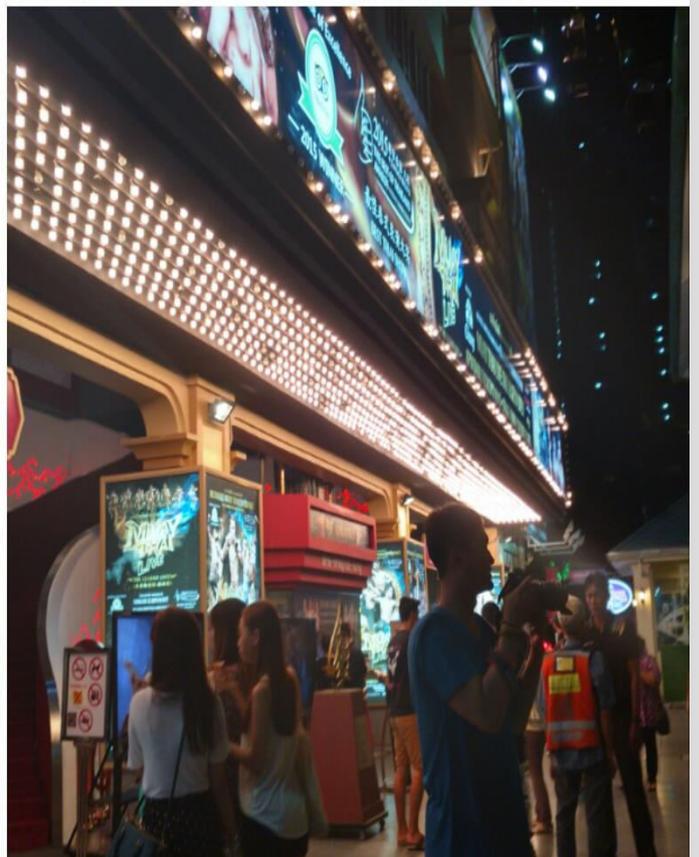
10TH JANUARY 2016

To break free of the monotonous routine the students were given a chance to rejuvenate their souls. Especially for the girls, it was a day for the shoppers. A shopper's paradise so rightly called THE MBK MALL was the destination.

MBK Center, also known as **Mahboonkrong** is a large shopping mall in Bangkok, Thailand. At eight stories high, the centre contains around 2,000 shops, restaurants and service outlets, including the 4-story Tokyo department store.

Had that not been enough, an energising time at Asiatique awaited us. **Asiatique The Riverfront** is a large open-air mall in Bangkok, Thailand. It is situated in the former docks of the East Asiatic Company, and faces the Chao Phraya River and Charoen Krung Road. A boat ride followed by a walk around the night market, the students thoroughly enjoyed the day and were overjoyed by the ambiance and warmth with which the city treated them.





11TH JANUARY 2016

The students had the opportunity to visit the various laboratories present at AIT. AIT usually does not allow outsiders into their labs as some patent filed research works are continuously going on there. As a result of Prof. Nitin Kumar Tripathi's effort we got a chance to visit the **Energy park**, **Ambient laboratory** (Environmental Engineering) and the **Nanotechnology lab**. It was a precious experience for all the students.



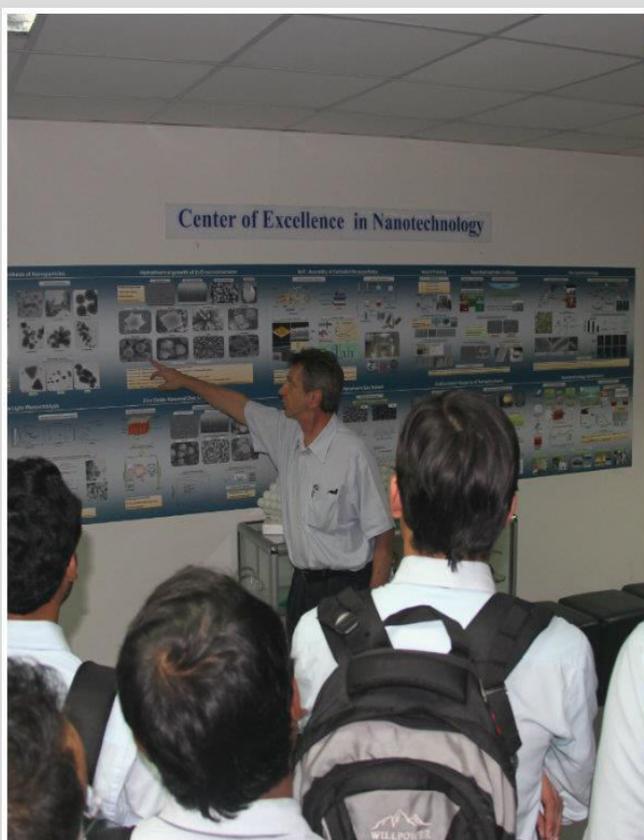
12TH JANUARY 2016

A session on THE ART OF LIVING was taken by Prof. V Rajesh Choudhary. The session made the students reflect on their lives so far. It taught the students the art of loving one self and believing in the existence of god. All in all the class was soothing and reflective.

This day was the last day of technical seminars. The first session was on Packaging Technology headed by Prof. Erik Bohez. The use and need for such technology was discussed in details. Stress was given on:

- Product safety
- Cost of packaging
- Speed of packaging and
- RFID enabled intelligent packaging

Post lunch a session was kept on Nanotechnology. It was delivered by Dr. Louis Horniyak who introduced carbon nanotubes, surface Plasmon and brought light on Quantum dots and Quantum tunnelling. Truly the world is made up of nanomaterial.



13th JANUARY 2016

As the day would come to an end after their technical and elaborate sessions the students would make it a point to spend some time post dinner practising for a small event namely, the cultural night. The AIT team had this event organised to award as well as end this winter education camp.

AIT Conference Centre was the venue. The guests of honour included:

Prof. Worsak(Honourable AIT President)

Prof. Voratas(Dean for the school of engineering and technology)

Mr Harsh Sethi (General Secretary Indo-Thai Chamber of Commerce)

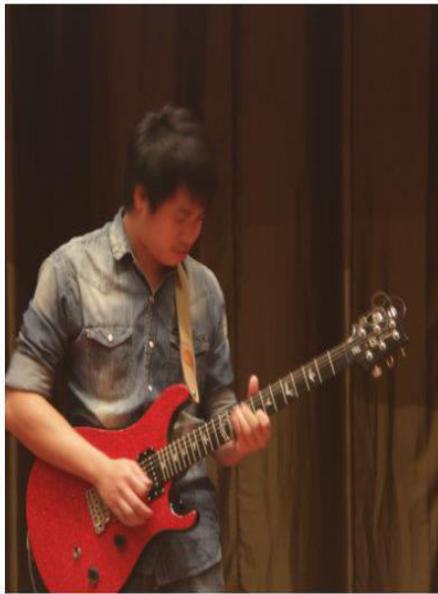
Mr Kishan Batta(CEO of Fabritect)

Joined the event.

Since the students decided to keep the theme INDIAN and country based all the performances were traditional and rooted for the country. An insightful speech by the AIT president while a vote of thanks by the JIS GROUP faculty, student's speech, a group song, a group dance and finally the union of Thai and Indian national songs marked the show of the day. All the performances were highly appreciated. Awards and certificates were distributed. The day ended on a high and eventful note with emotions and gratitude flooding the atmosphere. The entire journey had made the students grow in all phases of their lives and this new change marked the betterment of these students as they added more experience to their lives.

A farewell dinner was also organised by the AIT team to show how much they appreciated and enjoyed our presence at their institution.







14TH JANUARY 2016

Since all the technicalities had come to an end and AIT had already bid us farewell we were given a final farewell gift- a visit to **FUTURE PARK.**

The mall houses more than 70 restaurants and food outlets, eight major banks and financial institutions, a post office and outlets for all phone networks and mobile phone service providers. Entertainment options include multiplex cinemas and D-Cine private theatres, which feature karaoke and on-demand movies.

The girls quickly got engaged with their last minute shopping instincts while most of the others were engaged by the grandeur of the place.



15th JANUARY 2016

The ending of an amazing, knowledgeable and engaging journey.

The 15th of January marked the ending of our camp. As we made our way to Suvarnabhumi International Airport for departure, the students had grown wiser and older.

Not only had they learnt about technological advancements but also the true meaning of teamwork and brotherhood was taught to them not by the teachers but by the experience of their life.

The journey from the Asian Institute of Technology Campus to the airport was silent and peaceful as students and the faculty itself flashed back and traced their best 13 days. We are greatly thankful to JIS GROUP for giving us this opportunity which has made a landmark in our hearts.

"IT WAS NOT JUST AN EDUCATIONAL CAMP

IT WAS A BONDING TO BE CHERISHED FOREVER! "



Prof. Nitin Kumar Tripathi, Director, Special Degree Program, AIT, Bangkok along with his very efficient team for conducting Winter Camp Study Tour, Collaborative Academic Program-2016



Prof. Worsak (Honourable AIT President), Prof. Voratas (Dean for the school of engineering and technology) ,Mr Harsh Sethi (General Secretary Indo-Thai Chamber of Commerce),Mr Kishan Batta (CEO of Fabritect), Prof. Nitin Kumar Tripathi, galaxy of Academicians along with students on Cultural Night.



Report Submitted By:

Faculty Members



Mr. Soumen Ghosh
Asst. Professor,
Dept. Of Information
Technology
Narula Institute Of
Technology
Agarpara, WB, India

Dr. Karabi Ganguly
Asst. Professor,
Dept. Of Bio-Medical
Engineering
JIS College Of
Engineering
Kalyani, WB, India



Students



Abhisek Juneja

Dept. Of Electronics & Communi-
cation Engineering
Narula Institute Of Technology



Ahilya Chhetri

Dept. Of Electrical Engineering
JIS College Of Engineering



Bitan Saha

Dept. Of Electrical Engineering
Narula Institute Of Technology
& 37 Other Students.