



FLASH

Electronics & Telecommunication Engineering
Departmental Newsletter

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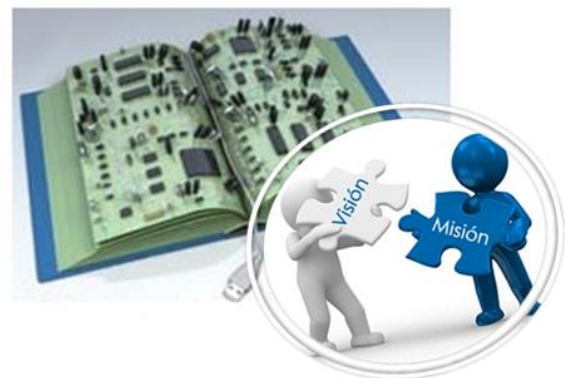
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VISION

To evolve into a Holistic Learning Hub that moulds technologically proficient engineers in the field of Electronics and Telecommunication; contributing to the global industry and society with Integrity, Ethics and Professionalism as envisaged by Don Bosco



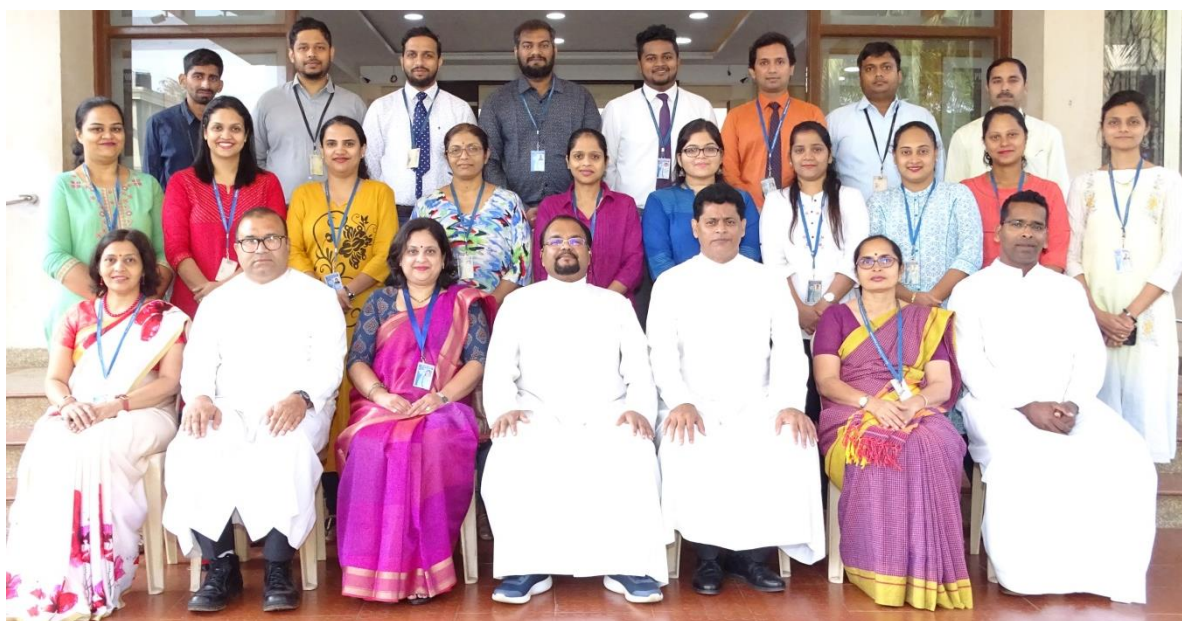
MISSION

- To impart education abreast with the fundamentals and advances in technology and transform students into globally accepted professionals
- To foster networking with all stakeholders for promoting technical innovation, research and entrepreneurship
- To encourage various skill enhancing activities and extra-curricular activities to instill high levels of work ethics and responsibility for a better society

DEPARTMENTAL DETAILS

The Department has well qualified and experienced faculty in the areas of Electronics & Communication, VLSI, Embedded, Signal Processing, Automation and Control Engineering. The Department offers Bachelors of Electronics & Telecommunication Engineering programme, with total number of 60 seats in the 1st year and 12 seats for lateral entry into the second year.

The department has been organizing various programs to enhance the Industry -Institute interaction through field visit and workshops. Every year students of Third year and Final Year are exposed to Industry through internship programme of 1 month duration for industry experience.



Department has 12 fully functional Laboratories as listed below, along with the different Software.

- Embedded Lab
- e-Yantra Robotics Lab

➤ LABORATORIES

- Electronics Engineering
- Power Electronics and Control Systems
- Devices and Circuits
- Communication Engineering
- Microprocessor
- Electrical Engineering
- Electrical Technology
- Digital Systems and Electronic Instrumentation
- Signal Processing Lab
- Advanced Communication Lab

SOFTWARES

MATLAB
Xilinx 14 Version
OSCAD
MAGIC
LabVIEW
OCTAVE
POISARPro

KITS

8051 kits
ARM kits
PIC kits
PLC kits
LAN Trainer kits
OFC Kits
PSoC ARM Cortex Kits

MoU Collaboration activities

Workshop on “Drone”

The IEEE Student Branch of DBCE, in collaboration with Eduvance and Drona Aviation organized three days hands on workshop on “Drone Design and Aviation, from 7th February to 9th February 2020. Prof. Yeshudas Muttu, IEEE Branch Counselor & Prof. Flavia Leitao were the faculty coordinators for the workshop, along with Dr. Varsha Turkur, HOD of ETC Dept.

The resource person for the workshop was Mr. Prathamesh Satardekar, Senior Systems Engineer & Mr. Ashish Yadav, Junior Systems Engineer from Eduvance, Mumbai. The main objective of this workshop was to give the student a hands-on experience of the latest technologies that are used in industry, such as Drones, AR (Augmented Reality) & VR (Virtual Reality).



The participants were asked to pair up in groups of two and were provided with the necessary components to assemble a drone. The students also learnt methods to program any hardware such as In System Programming (ISP), USB port programming and wireless programming. Finally they tested the experimental programs and APIs, and also were successful in flying the drones.

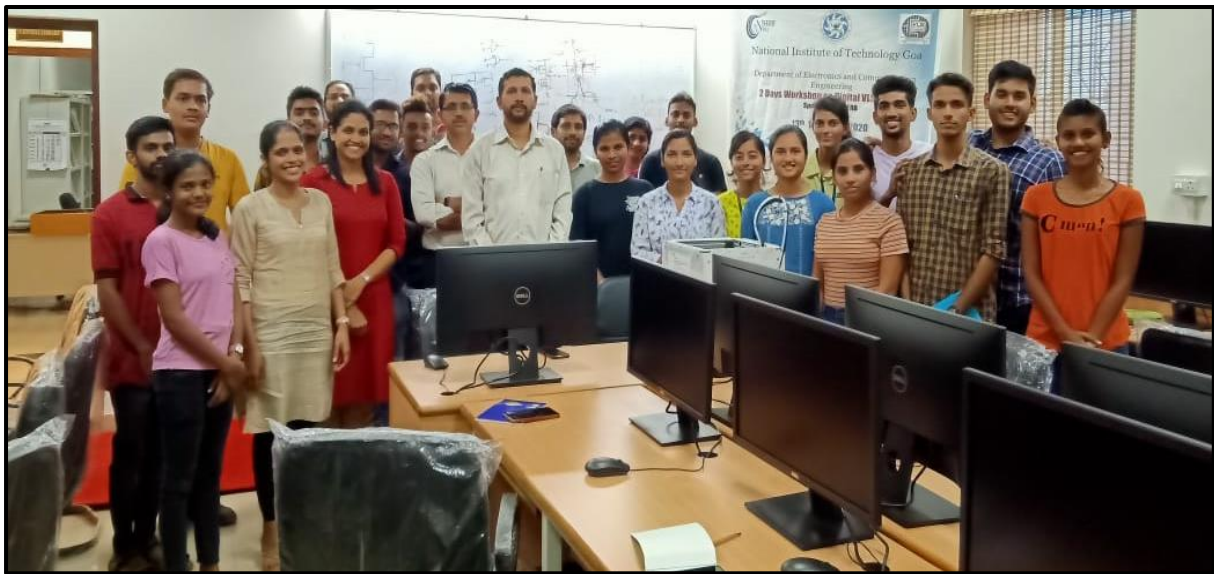
This event was one of the activities planned under the MoU signed between Eduvance and DBCE.



Workshop on “Digital VLSI Design”

A two day hands-on workshop on “Digital VLSI Design” was organised by National Institute of Technology, Goa for the students of the Department Electronics and Telecommunication Engineering of Don Bosco College of Engineering, under the . The workshop was held at NIT, Goa on 13-14th March 2020 and was attended by 25 students from the ETC Department along with two faculty members Prof. Anisha Cotta and Prof. Samantha Cardoso.

On the first day the session began with an introduction by the professors from NIT, Goa, Dr. Nithin Kumar and Dr. Vasantha M.H. The students were also welcomed with warm and inspiring words from the Director of NIT, Goa, Dr. Gopal Mugeraya. The morning sessions were conducted by the professors Dr. Vasantha M.H. and Dr. Nithin Kumar wherein they explained the various basic concepts underlying VLSI designs, followed by a hands-on session in Cadence.



On the second day, a session was conducted by Dr. Nithin Kumar wherein he covered the details of CMOS inverter and its applications, and encouraged questions from the students and cleared their doubts with great enthusiasm. The afternoon sessions included a hands-on session of the Cadence software in the NIT, Goa Design Lab.

The students could work on the software themselves with guidance from the research scholars of NIT, Goa and practically verify the concepts taught during the theory sessions.

It was a very informative, useful and satisfying experience for the students to learn and explore Digital VLSI Design. NIT, Goa also encouraged the students to come back and experiment with the software in the future with their own ideas.



This event was one of the activities planned under the MoU signed between NIT, Goa and DBCE, and was organized by Dr. Varsha Turkar.

Four day online programme on “Aerial Robotics: designing for beginners”

The ETC Department of DBCE under the banner of DBEATS in collaboration with InfiCorridor Solutions Pvt. Ltd., Mumbai organized an Online four day programme on 'Aerial Robotics : Designing for Beginners' using Autodesk Fusion 360. It was conducted from 16th June to 19th June 2020 from 4 to 6 pm, conducted online using Microsoft Teams platform.

The resource persons for the sessions were Mr. Yash Turkar, Mr. Christo Aluckal and Mr. Sumedh G. Deshpande, all part of the Research and Development Team at InfiCorridor Solutions, under the direction of Dr. Yogesh Agarwadkar. The workshop covered the following concepts: 1. Designing the components from scratch 2. Assembling the components to create a model 3. Basics of Design and Systems Engineering 4. Rendering and Animating the models 5. Basics of Simulation using Finite Element Analysis.



This online workshop was coordinated by Dr. Varsha Turkar and Prof. Deron Rodrigues. This event was one of the activities planned under the MoU signed between InfiCorridor Solutions Pvt. Ltd. and DBCE.

Two final year projects are running under MRINQ Technology and Enviroguru Solutions under the MoU signed between these companies and DBCE

Virtual Lab Set-up in ETC Dept, DBCE

Due to the rapid growth of Information and Communication Technologies (ICT) it has now been possible for virtual laboratories to be used as an alternative to physical labs by providing the merits of being used at anytime, anyplace, in this ‘on-line learning’ world of engineering education. Keeping this in mind, the ETC department conducted a session on Virtual Labs for the faculty members on the 10th January 2020 in the Signal processing lab.

The aim of this session was to create an awareness on the utilization of web-based experiments, virtualization and simulations towards enhanced learning. It was very informative and interactive session. The session was organized and conducted by Prof. Mathilda Colaco.



STUDENT'S CORNER

Workshops/Seminars/In-house Trainings/ Project Exhibitions

Workshop on “Introduction to Internet of Things (IoT)”

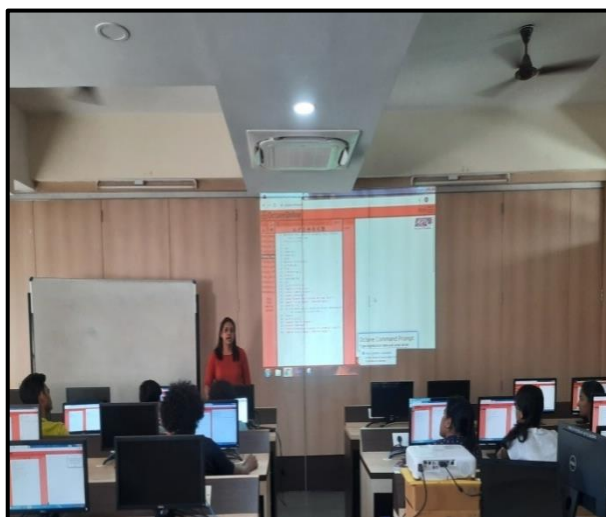
A four day workshop on Introduction to Internet of Things was organized by the ETC Department, in association with DBEATS council, for the students of first year ETC from 13th to 16th of January, 2020. The resource persons for the workshop were Mr. Rohit Sardessai and Mr. Siddhesh Nayak, both alumni of Don Bosco College of Engineering.

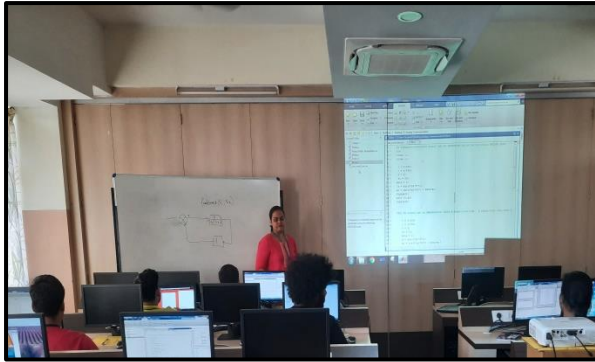


The workshop introduced the students to concepts such as cloud architecture, HTTP protocol, ways to communicate between clients and servers etc. The students learned how to stream sensor data to the cloud and receive it back on a remote device. They also learned how to control outputs on the microcontroller using voice commands from a phone, which can be used for home automation. The workshop was coordinated by Prof. Deron Rodrigues.

Workshop on “Introduction to NS2 and Matlab”

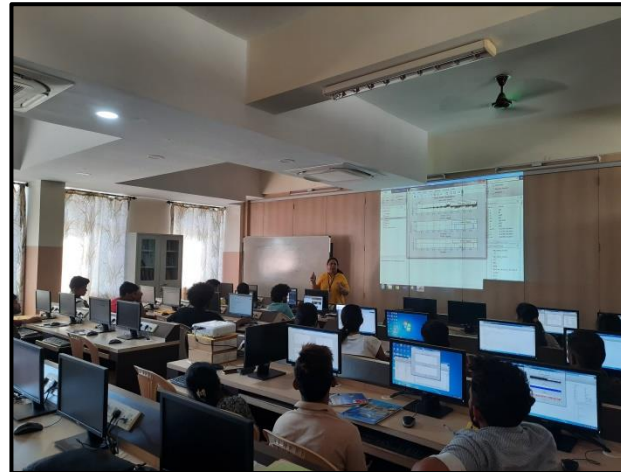
A Half Day workshop on “Introduction to NS2 and Matlab in Communication and Control Systems” was conducted on 25th January 2020, for students of ETC Department. The workshop was conducted by Prof. Michelle Araujo e Viegas, Prof. Trima P. Fernandes e Fizardo and Prof. Anisha Cotta. 18 students showed keen interest, enrolled and attended the workshop. The workshop was conducted to introduce the students to NS2 and to demonstrate the application MATLAB to study analysis of Control Systems and Communication Systems.





Network Simulator 2 is an event driven simulation tool that is useful in studying the dynamic nature of communication networks. The basic architecture of NS2 was explained as well as installation process of NS2 on Windows 7 was demonstrated. Students were shown a demo of few codes like creating topology, adding traffic etc.

The application of MATLAB in Control System was demonstrated using the Control System Toolbox. The students were given transfer functions and MATLAB codes were written to analyse the systems in time domain and frequency domain. Some of the topics covered using the Control system toolbox were Block Diagram Reduction, Bode plots, Polar Plots, Nyquist Plots, Finding responses for various types of standard inputs, Root Locus etc.



Workshop on “Roadmap to 5G Antenna”

The Antenna Research Group & Parikrama-student satellite club, conducted half day workshop on “Roadmap to 5G Antenna “for the second year ETC students, on 25th January 2020. With regards to this, Prof. Mohini N. Naik, Asst. Professor of ETC Engineering, DBCE, took sessions from basics of electromagnetic waves, to 5G antenna design. Sesssion1 started with basics of electromagnetics, spectrum and applications of each frequency. Relation between frequency and dimensions of the designed systems. In Session 2, Prof. Mohini Naik explained various antenna aspects, basics of 1G, 2G, 3G & 4G antenna and introduced 5G antenna design and requirements.



Workshop on “PCB Design”

To fulfil the Industry goals and requirements the department of ETC in association with DBEATS conducted a one day workshop on “PCB Design” on the 8th of February, 2020 for the third year students of ETC. Total of 38 students attended the workshop.

The resource people for the workshop were Prof. Flavia Leitao, faculty at DBCE. The following contents were covered for the workshop: Understanding of the Circuit, Knowledge of component packages, Testing the circuit on breadboard, Drawing circuit layout and transferring mirror image of layout on PCB, Masking to remove the unwanted copper, Etching, Drilling and mounting of components, Soldering and Testing.

The circuit implemented on the PCB was an “Astable Multivibrator”. The coordinators for the workshop were Prof. Flavia Leitao and Prof. Melba D’Souza.



Workshop on “Python”

First Year Electronics and Telecommunication engineering students OF Don Bosco College of Engineering attended a four day hands on workshop on “Introduction to Python Programming” on 28th-29th February and 13th-14th March, 2020 in Don Bosco College of Engineering, Fatorda Goa. Asst. Prof. Priyanka Padiyar was the resource faculty for the workshop, which was organized by Dr. Varsha Turkar.

The first day of the workshop covered introductory topics such as Basic data types and variables, arithmetic operations, strings and operation of strings, data structures such as lists, sets, tuples, dictionaries and range.

On the second day of the workshop, topics such as installation and use of various modules such as math, matplotlib and numpy were covered. Also, plotting of bar graphs, histograms, pie-charts, scatter plots using matplotlib was covered and trigonometric and logarithmic graphs using numpy was covered.

On the third day, operations on trigonometric functions and logarithmic functions were covered using math and numpy module. Also, plotting of various mathematical functions using numpy and matplotlib was covered. Students were also taught how to modify the various features of a graph, multiple plots, subplots etc.

On the last day of workshop, students were taught about conditional statements, loops, control flow and pattern printing

In this hands-on course, students gained hands-on experience on Python programming and its features. Students learnt the applications of various modules in Python



GCCI Student project Competition, Phase-1

Goa Chamber of Commerce & Industry (GCCI) & Goa State Innovation Council (GSIC) are jointly organizing final year innovative projects Competition for the academic year 2019-20 for students of engineering colleges affiliated to Goa University. It is a unique opportunity to showcase their work and to win recognition and reward.

A total of 8 entries from final year students of the ETC of DBCE had registered earlier for the competition. The event was held on 13th February 2020. The jurors for the event were: Mr. Venugopal T R, Corporate Relations Manager, FIIRE- Fatorda, Ms. Sanjeeta Nadkarni, Autotech, Mapuca, Mr. Myron Rodrigues, Graduate Perception Engineer, Dynium (Alumni of DBCE). The following projects were nominated for phase-2 of Final Year innovative Projects Competition: 1. Aquatic Waste Collecting System and 2. Fire Fighting Robots Using Swarm Intelligence. The event was coordinated by Prof. Anisha Cotta.



Workshop on “Analog IC Design”

The IETE student branch of ETC Department of Don Bosco College of Engineering, Fatorda-Goa organized a two day workshop on Analog IC Design. Workshop was held on 13th and 14th March 2020 at Signal Processing Lab. Workshop was open for Third year ETC students.

The resource person for the workshop was, Mr. Akhil U. Masurkar, Ass. Prof. from Vidyalkar Institute of Technology, Mumbai. The workshop included topics: Basics of VLSI, Difference between Analog and Digital VLSI, Current mirrors, Cascode current mirrors and CS amplifiers. On the second day of workshop topics covered were: CD and CG amplifier, Differential amplifier and Operational amplifier.

The workshop was co-ordinated by Dr. Shreyas Simu and Dr. Varsha Turkar.



Workshop on “Node JS”

The IETE student branch of ETC Department of DBCE, organized a two day workshop on the topic, ‘NodeJS’, on February 28-29, 2020 at the Signal Processing and Machine Learning Lab. The talk was open for Third year and Final year ETC students. The resource person for the workshop was, Mr. Sumeet Gohil. MSc. in IT from Thakur College (Mumbai University). The first day was about backend development which included topics: Backend Introduction, Database Introduction, Get Started (NodeJS with Express), Server Setup, Create API. Also topics covered were: Routes, Database (MySQL or MongoDB), Controllers/Models, Data Validation, Deployment (Heroku). On the second day of the workshop, frontend development topics were covered. In the morning session, the students were familiarized with Frontend Introduction, HTML/CSS/JS Introduction, Get Stared (ReactJS), Client Setup, Create Basic APP. Other topics covered were: Add Routes, Data Exchange between Server and Client, etc. The Workshop was Co-ordinated by Dr. Shreyas Simu and Dr. Varsha Turkar.



Workshop on “Ground station development and HAM radio”

Student Satellite club, Parikrama in collaboration with Goa Radio Amateur Society (GRAS) Organized hands on workshop on “Ground station development and HAM radio”. The workshop was held on 7th March 2020 at the DBCE campus at Fatorda, Goa. This event was open only for student satellite club members. Prof. Mohini Naik, Principal Investigator & Prof. Sweta Morajkar, CO-PI were the faculty coordinators for the workshop.

The resource person for the workshop was 4 member team from Goa Radio Amateur Society (GRAS). Mr. Amey Pandit, Embedded system design engineer & HAM radio operator with call sign VU2YQ, Mr. Mahindra Kannavar, Electronics & Instrumentation Engineer and HAM radio operator (VU2ZMK). Mr. Flavio Raposo is a retired Chemistry Professor from Don Bosco Panaji & HAM radio operator (VU2WPR) and Mr. Vishal Naik, HAM radio operator (VU3BBH). The main objective of this workshop was to give the students a hands-on experience to receive the satellite data using Software defined radio (SDR).



Mr. Amey Pandit took over the session by showing HAM radio Video and its importance. He also explained the how to become a HAM radio operator. He also explained the radio Trans receiver designed by the team to transmit/receive the signal to the satellite. In the next session, Mr. Mahindra Kannavar, gave a demonstration on walkie talkie phones and explained the difference between HAM & walkie talkie phones. Mr. Flavio Raposo & Mr. Vishal Naik both being the HAM radio operator gave a brief demo on Software defined radio and signal reception using SDR. Mr. Amey Pandit, showed the Q 10 Satellite reception using simple dish TV antenna.



e-Yantra Task Based Training in Robotics

e-Yantra is a Project hosted by IIT Bombay to spread education in Embedded systems and Robotics in colleges across India and sponsored by MHRD through NMEICT. The main purpose of DBCE to engage with e-Yantra was to empower teachers and students to create a culture of innovation and entrepreneurship in our college.

With this Objective in mind, the e-Yantra team of DBCE which includes Prof. Flavia Leitao, Prof. Yeshudas Muttu, Prof. Mathilda Colaco and Prof. Deron Rodrigues, along with our HOD Dr. Varsha Turkar came up with an innovative Teaching- Learning strategy, which was Task Based Learning meaning Learning by Doing.

The e-Yantra student's team of DBCE was formed and were given study material which the students were expected to go through and perform the related task.

The students learnt to Interface the Firebird Robot with the LED, LCD, Buzzer, Boot Switch, Motors and carry out tasks like performing a particular motion, controlling the speeds, displaying particular data, line followers and so on.

The various tasks were floated with definite deadlines and the students showed keen interest in performing these tasks well before deadlines and enjoyed working on these tasks.

The Judging team had a tough time evaluating the different teams. It was an overwhelming experience to see such enthusiasm amongst out students.

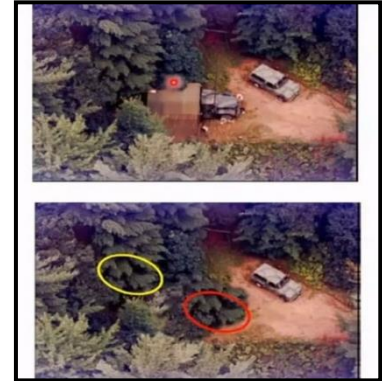


EXPERT TALKS

The IEEE Student Branch of DBCE, Goa Organized “Tech Insight: a webinar series”, in association with the IEEE Bombay Section under the leadership of IEEE Branch Counselor, Prof. Yeshudas Muttu from 20 May 2020 to 28 May 2020 with unflinching support & motivation of Head of ETC Department, Dr. Varsha Turkar.

Expert talk on “Image Forensics”

The speaker for this webinar on 20th June 2020 was Dr. Sangita Chaudhari, Professor RAIT, Navi Mumbai, on “Image Forensics”. Dr. Sangita Chaudhari started with a history of image manipulation. Later on, she explained Image Forgery, its two approaches, enhancing & watermarking images and techniques involved in the detection of image forgery. Details on how to go about image splicing detection and inconsistencies of detection were stated. Towards the end of the session, the speaker has an interaction with Prof. Yeshudas Muttu to answer most of the questions posted by the attendees onto the YouTube live chat.



Expert talk on “Data Science and Data Analytics”



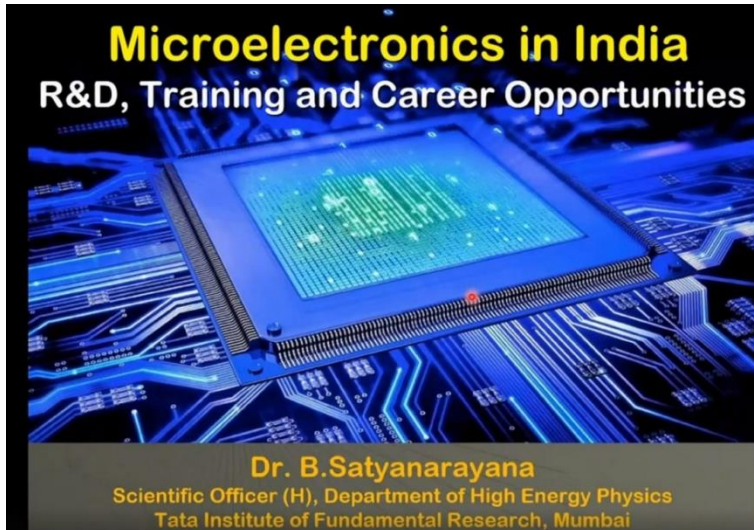
The speaker for this webinar on 21st June 2020 was Dr. Amiya Kumar Tripathy, Professor, DBIT, Mumbai, on “Data Science and Data Analytics”. Dr. Tripathy commenced the session by introducing the basics of data science and the Internet of Things (IoT). He then played a video of ‘Life Simplified’ which showed how IoT simplifies our lives in daily use. The speaker proceeded to explain the basics of Analytics and its three types, the programming tools for data research which include SAS, R, Hadoop, Python, etc.

Expert talk on “Wireless Network Simulation Tools”

The speaker for this webinar on 22nd June 2020 was Dr. Saurabh Mehta, Chief Academic Officer, VIT, Mumbai, on “Wireless Network Simulation Tools”. Dr. Mehta introduced to the wireless networks & spoke on how it is related to IoT and the three standard acceptable ways to test wireless networks.



Expert talk on “Microelectronics in India”



The speaker for this webinar on 26th June 2020 was Dr. B Satyanarayana, TIFR, Mumbai, on “Microelectronics in India”. Dr. Satyanarayana provided knowledge about study and manufacturing of small electronic circuits. Further, he explained industrial standard ICs, ASSP, ICs & VLSI. Sir spoke about the challenges of technology and various jobs available like design engineers, verification engineers, etc.

Expert talk on “Satellite Image Processing”



The speaker for this webinar on 27th June 2020 was Dr. Varsha Turkar, Professor & Head of ETC Dept., DBCE, Goa, on “Satellite Image Processing”. Dr. Varsha Turkar began her session with the basics of remote sensing, its need and techniques. SAR (Synthetic Aperture Radar) and POLSAR (Polarimetry SAR) with its various applications along with advantages and disadvantages were discussed. Data processing steps, thermic map, scattering matrix, image classification, methodology and data processing were elaborated.

Expert talk on “Industrial Machine Learning: Considerations and Opportunities”

The speaker for this webinar on 28th June 2020 was Dr. Shaunak De, Data Scientist, Capella Space Corporation, USA, on “Industrial Machine Learning: Considerations and Opportunities”. He initially spoke about how he built his mini-project – various libraries used, the ideation, etc. With knowledge of about 20 programming languages, he stated that the basic Product Roadmap to deep learning is Data Labelling, Data Storage, Data Versioning and Data Processing. He also gave us a variety of platforms to pick and choose from to better our journey on the given roadmap.



FIELD VISITS

“Goa Waste Management plant (GWMS)”

The ETC Department organised a fieldtrip to Goa Waste Management plant (GWMS), on February 5, 2020. The class was accompanied by Prof. Samantha and Dr. Shreyas. GWMS collects the waste from around 26 to 27 Panchayats.

They collect the segregated waste i.e. dry and wet waste separately. Dry waste has two categories i.e. recyclable and non recyclable. Recyclable wastes such as plastics, cardboards are supplied to the recycler and are not further treated. Whereas non-recyclable waste such as clothes, thermocols are compressed and are used for cement processing.

Non-recyclable waste is sent to cement industries where it is used effectively in cement processing.

Wet wastes are thrashed in composter, then made into sludge where oxidation takes place called as Aerobic Process. The sludge is kept for some days. Due to anaerobic process methane gas is released then the gases which are generated are sent to the Biogas engine which provides electric energy to the plant.



The remaining slurry is used as manure which improves the fertility of the soil and can be used for plantation. Thus the efficient use of the waste is made and management is done. This visit to the plant made us aware that the proper waste management is essential for our environment and for the future.

“Oil and natural Gas corporation (ONGC)”

The Second Year ETC Students visited ONGC, Goa on 5th February, 2020. The students were accompanied by Prof. Trima Fernandes e Fizardo and Prof. Selvyn Fernandes.

ONGC (Oil and natural Gas corporation) is the largest crude oil and natural gas company in India. It is the only public sector Indian company to feature in Fortune’s ‘Most Admired Energy Companies’ list. ONGC has a unique distinction of being a company with in-house service capabilities in all areas of Exploration and Production of oil & gas and related oil-field services.

The ONGC plant at Betul basically deals with fire fighting and safety measures required during search and extraction of oil. This is of great importance as oil is highly flammable and safety precautions need to be taken while operating it. So, for this purpose, various facilities for safety training are present at Betul Plant.



The students were welcomed by Mr. Jayant Kumar Singh, an officer at ONGC. He gave a brief introduction about ONGC and its operations. Firstly, an introduction to various manual fire fighting tools, various chambers to generate foam, cut out models of the tools used were shown. This was followed by depiction of various impactful equipment which were Water Monitor- an aimable controllable high capacity water jet used to extinguish fire at a range of up to 60 m, Fire Fighting nozzle, Mayur Valve, Water Umbrella each one having a specific advantage for a specific application. The students were also taught about the different types of extinguishers and their SOP (standard operating procedure). These include – Water type, Powder(chemical type), Foam and Gas(Co₂).

The field visit was a very exhilarating experience for all the students and made the students aware about ONGC and also about the career opportunities in such PSU’s. The staff at ONGC was very welcoming and supportive.



STUDENT'S EDUCATIONAL TOUR

The IEEE Student Branch of Don Bosco of Engineering, Goa organized its second Educational Tour to Bangalore from 28th February 2020 to 4th March 2020 under the guidance of IEEE Branch Counselor, Prof. Yeshudas Muttu. 61 IEEE student members along with 4 Faculty members, Prof. Yeshudas Muttu, Prof. Mohini Naik, Prof. Deron Rodrigues & Prof. Mathilda Colaco visited Nashik Thermal Power Station- Eklahare, Sarda Farms & Sula Automation.

The team visited Sula Vineyards to get acquainted to the automation technology used. The guide toured us through the entire process involved in making wine & process control instrumentation involved in the same.



The IEEE members travelled to Sarda Farms which is a 100% pure, organic dairy farm. It is an 11-acre farm that houses 1250 cows. The team visited Nashik Thermal Power as well. The educational tour was a great benefit for the IEEE student members to understand about the various concepts of Process control Instrumentation at Sula Automation, Generation of Electricity at Thermal Power station & RFID technology with IoT interface at Sarda Farms.



STUDENT'S ACHIEVEMENTS & FELICITATION

- Mr. Renvick Fernandes has been selected in the “Student and Young Professionals activities committee 2020”, under IEEE Bombay section.
- Mr. Gautam Desai from TE ETC successfully completed NPTEL course in “Programming in C++”.
- Mr. Aaron Fernandes from SE ETC successfully completed NPTEL course in “Introduction to internet of things”.
- Mr. Abhishek Dhumvad and Ms. Drasti Naik from TE ETC successfully completed NPTEL course in “Programming, Data Structures And Algorithms Using Python”.
- Mr. Aaron Fernandes from SE ETC successfully completed NPTEL course in “The Joy of Computing using Python”, with a score of 96, from Jan June 2020.
- Ms. Valini D’silva from TE ETC successfully completed NPTEL course in “Python for Data Science”, with a score of 82, from Jan June 2020.
- Mr. Stanford Da silva, Ms. Shradha Sawant and Mr. Joel Fernandes from SE and TE ETC successfully completed NPTEL course in “An Introduction To Programming Through C++”.
- Mr. Harshavardhan Desai, Mr. Xavier David and Mr. Sahil Sawant from SE ETC successfully completed NPTEL course in “Network Analysis”.
- Mr. Ashwin Faldessai, Ms. Saili Naik and Ms. Priya Kamat Participated in Student’s Parliament competition 2020, organized by Goa Legislature Secretariat, Porvorim, Goa held on 29th Jan 2020.
- Ms. Priya Ganesh Kamat Participated in Ideas Unleashed Essay Competition, organized by International Centre, Goa held on 4th Feb 2020.

TRAINING & PLACEMENT

- The students attended a number of Online Internships/ Training/ Workshops/ Webinars on various topics to upgrade their knowledge in various domains during the Pandemic period.
- Mr. Lino Dias, Ms. Neha Shanbhag, Mr. Nixon Coutinho, Mr. Shivam Bale and Ms. Vranda Asolkar are placed in Pinclick, Mumbai.
- Ms. Swizel Monteiro, Ms. Lasandra Fernandes and Ms. Vranda Asolkar are placed in IBM, Bengaluru.
- Mr. Sherwin Colaco is placed in Coditas, Pune.
- Mr. Sayed Saif Ahmed is placed in Tangentia, Goa.
- Mr. Raviraj Bhagat, Mr. Sahil Lotlikar and Ms. Sibga Shaikh are placed in Capgemini, Mumbai.
- Ms. Akshata Naik is placed in Wipro, Bengaluru.
- Ms. Lasandra Fernandes is placed in Godrej, Goa.

FACULTY INITIATIVES

CERTIFICATIONS/ AWARDS

- Prof. Varsha Turkar, Professor and Head of Department of ETC from Don Bosco College of Engineering was invited as a Chief Guest and Keynote Speaker at 25th Prestigious World Conference on Applied Science Engineering and Technology which was held on 29th and 30th December 2019, Nanutel Margao, Goa, organized by IFERP-Institute for Engineering Research and Publication. The topic of talk was “Geographic Information System and Remote Sensing Education in India, the Issues and Solutions”.
- Prof. Mohini Naik has been selected and appointed as the “Regional Mentor of Change”: Head of mentor of change programme for GOA state by NITI AYOJ, GOVT. OF INDIA. After competitive rounds of selection and reviews, top 37 candidates have been identified all over INDIA. With regards to this, Prof. Mohini Naik, was called on by the honourable Governor of Goa, His Excellency Shri Satya Pal Malik at the chamber of Governor of Goa, Raj Bhavan Goa on 5th March 2020. Governor of Goa appreciated the work done by , Prof. Mohini Naik and encouraged her to work further on the project.
- Prof. Mohini Naik has been selected and appointed as the “Regional Mentor of Change”: Head of mentor of change programme for Goa state by NITI AYOJ, Govt. of India. She was honoured and felicitated at the hands of Shri. Rajiv Kumar, Vice Chairman, Shri. Amitabh Kant, CEO & Dr. R Ramanan, Mission Director of the Atal Innovation Mission (AIM) NITI AYOJ on 31st January 2020 at NITI Ayog, New Delhi.



- FOSSEE NMEICT conducted the "FOSSEE Proponent Symposium 2020" on 7th March 2020. Participation in this event was through invitation. Faculty contributors of various FOSSEE activities, top scorers in the Yaksh online test conducted for the participants of the massive blended workshops (organized jointly by both FOSSEE and Spoken Tutorials) were invited. Prof. Kimberly Morais of Don Bosco College of Engineering was invited for the event and felicitated for her work.



- Prof. Mathilda Colaco was called as a resource person to conduct vlabs awareness session for the faculty members of Curchorem Polytechnics on 27th February 2020, and for the students of Fr. Agnel Polytechnics, Verna on 6th March 2020. The aim of this session was to create awareness on the utilization of web-based experiments, virtualization and simulations towards enhanced learning.



- Prof. Yeshudas Muttu Judged Final Year Project Competition at Goa College of Engineering under Goa Chamber of Commerce Industry & Goa State Innovation Council on 18th February 2020.
- Dr. Varsha Turkar has delivered a webinar on “Career in Engineering” organised by training and placement office, DBCE, Goa on 26th May and 8th June 2020.
- Dr. Varsha Turkar has delivered a webinar on “Applications of Satellite Image Processing” organised by Usha Mittal Institute of Technology, SNTD Women's University, Mumbai and IEEE GRSS Mumbai Chapter on 8th May, 2020.
- Dr. Varsha Turkar has delivered a webinar on “Satellite Image Processing” organised by IEEE Student Branch of Don Bosco College of Engineering, Goa on 27 May 2020.
- Prof. Vidhya D S, successfully completed NPTEL course in “NBA Accreditation and Teaching - Learning in Engineering (NATE)” with a score of 94, from Jan June 2020.
- Prof. Samantha Cardoso, successfully completed NPTEL course in “NBA Accreditation and Teaching - Learning in Engineering (NATE)” with a score of 54, from Jan June 2020.
- Prof. Kimberly Morais, successfully completed NPTEL course in “Descriptive Statistics with R Software” with a score of 82, from Jan June 2020.
- All Faculty Members of the ETC department have developed digital content in their respective subjects so that Teaching Learning is not affected during the Pandemic period.

PAPER/ JOURNAL PUBLICATIONS

- Dr. Shreyas Simu, has presented a technical paper titled “Dental X-ray Image Enhancement using Evolutionary Algorithms”, International Conference on Computer Communication and Informatics, ICCCI 2020, IEEE, January 2020
- Prof. Priyanka Padiyar, has presented a technical paper titled “A comparative study of wavelet-based ANN and classical techniques for geophysical time-series forecasting”, 2020, Computers & Geosciences, Volume 984, Springer, ISBN -138 (2020) 104461, February 29th, 2020.
- Prof. Flavia Leitao has presented a technical paper titled “Automatic Shopping Mart using Firebird V Robot”, for the 5th International Conference on Engineering Research & Innovations, Equinox - 2020 organized from 19th to 20th March, 2020 at Terna Engineering College, Nerul, Navi Mumbai.
- Prof. Yeshudas Muttu has presented a technical paper titled “Automatic Shopping Mart using Firebird V Robot”, for the 5th International Conference on Engineering Research & Innovations, Equinox - 2020 organized from 19th to 20th March, 2020 at Terna Engineering College, Nerul, Navi Mumbai.
- Dr. Shreyas Simu, has presented a technical paper titled “Framework for Automated Bone Age Assessment from Digital Hand Radiographs”, Multimedia Tools & Applications, Springer. 2020 Apr 19, pp:1-8. Impact Factor: 2.101

WORKSHOPS/SEMINARS/EXPERT TALKS CONDUCTED

- Prof. Mathilda Colaco conducted a session on “**Virtual Labs**” for the faculty members of DBCE on the 10th January 2020 in the Signal processing lab.
- Prof. Deron Rodrigues arranged a four day workshop on “**Introduction to Internet of Things**” for the FE ETC students from 13th to 16th of January, 2020.
- Prof. Mathilda Colaco organized “**Entrepreneurship Awareness Camp**” sponsored under DST- NIMAT Programme at Don Bosco College of Engineering from 23rd to 25th January 2020
- Prof. Michelle Araujo e Viegas, Prof. Trima P. Fernandes e Fizardo and Prof. Anisha Cotta conducted a half day workshop on “**Introduction to NS2 and Matlab in Communication and Control Systems**”, for the TE ETC students on 25th January 2020.
- Prof. Mohini N. Naik, conducted half day workshop on “**Roadmap to 5G Antenna**” for the SE ETC students, on 25th January 2020.
- Prof. Yeshudas Muttu, Prof. Flavia Leitao and Dr. Varsha Turkar organized a workshop on “**Drone Design and Aviation**”, from 7th to 9th February 2020, in collaboration with Eduvance and Drona Aviation for the engineering students all across the state of Goa.
- Prof. Flavia Leitao and Prof. Melba D’Souza conducted a workshop on “**PCB Design**”, for the TE ETC students on the 8th of February, 2020.
- Dr. Shreyas Simu and Dr. Varsha Turkar organized a two day workshop on “**NodeJS**”, for the TE and BE ETC students on 28th to 29th Feb. 2020 at the Signal Processing and Machine Learning Lab.

- Prof. Mohini Naik organized a workshop on “**Ground station development and HAM radio**”, for the for student satellite club members on 7th March 2020
- Prof. Priyanka Padiyar and Dr.Varsha Turkar conducted a four day hands on workshop on “**Introduction to Python Programming**”, for the FE ETC students on 28th-29th February and 13th-14th March, 2020.
- Dr. Varsha Turkur, arranged a two day hands-on workshop on “**Digital VLSI Design**”, organized by National Institute of Technology, Goa for the ETC students of DBCE from 13th to 14th March 2020.
- Dr. Shreyas Simu and Dr. Varsha Turkar organized a two day workshop on “**Analog IC Design**”, for the TE ETC students on 13th and 14th March 2020 at Signal Processing Lab.
- Prof. Yeshudas Muttu and Dr. Varsha Turkar, organized expert talks, “**Tech Insight: a webinar series**”, for all engineering students from 20th to 28th May 2020
- Dr.Varsha Turkar and Prof. Deron Rodrigues arranged an online four day programme on “**Aerial Robotics : Designing for Beginners**”, in collaboration with InfiCorridor Solutions Pvt. Ltd., Mumbai from 16th June to 19th June 2020 from 4 to 6 pm, for all the engineering students.
- Prof. Flavia Leitao, Prof. Yeshudas Muttu, Prof. Mathilda Colaco and Prof. Deron Rodrigues arranged “**Task Based Training in Robotics**” for the e-Yantra student team of DBCE, from 15th Jan to 15th March 2020.
- Prof. Mathilda Colaco organized expert talk on “**Policies of S.S.I**”, “**Project Identification**”, “**Business opportunities**”, “**Project planning**”, “**Break even analysis**”, for the Entrepreneurship students of B.E ETC.

WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

- Dr. Varsha Turkar attended a four week workshop on “Fundamentals of GIS”, from University of California, Davis and offered through Coursera, from 30th May 2020 onwards.
- Prof. Flavia Leitao attended a four week workshop on “Introduction to the Internet of Things and Embedded Systems”, from University of California, Irvine and offered through Coursera, from 5th June 2020 onwards.
- Prof. Michelle Araujo e Viegas, Prof. Trima Piedade Fernandes e Fizardo and Prof. Samantha Cardoso, attended a three weeks 8 credit online course on "WhatsApp Outcome Based Education Faculty Development Program", organised by D Y Patil College Of Engineering, Akurdi Pune, from 24th March - 14th April 2020.
- Prof. Yeshudas Muttu and Prof. Deron Rodrigues attended a two week workshop on “Experimental Design & Optimization of Research in Machine Learning”, organized by Xavier Institute of Engineering, Mumbai, from 1st - 12th June 2020.
- Dr. Shreyas Simu and Prof. Yeshudas Muttu attended a two week workshop on “Remote Sensing & GIS Technology and Applications”, organized by Indian Institute of Remote Sensing (IIRS),ISRO Dehradun, from 13th-30th June 2020.
- Prof. Vidhya D S attended a one week FDP on “Moodle Learning Management System”, organized by Vidyalkar School of Information Technology - Mumbai, from 20th - 25th April 2020.

- Prof. Kimberly Morais and Prof. Priyanka Padiyar attended a one week FDP on “R programming”, organized by P.G. Department of Computer Application, P.R. Pote College of Engineering and Management, Amravati, from 27th April - 1st May 2020.
- Prof. Vidhya D S attended a one week FDP on “R programming”, organized by SKN Sinhgad college of engineering Korti, Pandharpur, from 30th April - 4th May 2020.
- Prof. Yeshudas Muttu and Prof. Deron Rodrigues attended a one week FDP on “Mind Quench: a Quarantine Webinar Series”, organized by Vidyalkar Institute of Technology (VIT), Mumbai, from 4th - 8th May 2020.
- Prof. Michelle Araujo e Viegas, Prof. Trima Piedade Fernandes e Fizardo, Prof. Samantha Cardoso, Prof. D.S. Vidhya, attended a one week FDP on “Scilab”, organized by ETC Department, S. B. Jain Institute of Technology, Management & Research, from 4th May 2020 to 9th May 2020.
- Prof. Anisha Cotta, Prof. Michelle Araujo e Viegas, Prof. Trima Piedade Fernandes e Fizardo, Vidhya D S, Prof. Priyanka Padiyar, Prof. Selvyn Fernandes attended a one week FDP on “Effective Proposal Writing for Research and Funding”, organized by Sandip Institute of Technology and Research centre, Nashik, from 13th May 2020 to 18th May 2020.
- Prof. Michelle Araujo e Viegas, Prof. Trima Piedade Fernandes e Fizardo, attended a one week FDP on “Spoken Tutorial Technology”, organized by Singhad Technical Education Society's Smt. Kashibai Navale College of Engineering, Pune, from 18th May 2020 to 22nd May 2020.
- Dr. Varsha Turkar, Prof. Vidhya attended a one week FDP on “Aerial robotics for Beginners”, organized by Bhagubhai Maftlal Polytechnic and InfiCorridor Solutions Pvt. Ltd, from 19 to 23 May 2020.
- Prof. Priyanka Padiyar, Prof. Vidhya D S attended one week FDP on “Arduino”, organized by ETC Department, Jaihind College of Engineering, from 19th to 24th May 2020.
- All ETC Faculty members attended a one week FDP on “TECH INSIGHT”, organized by DBCE IEEE student Branch, Fatorda, from 20th May 2020 to 28th May 2020.
- Prof. Mohini Naik, Prof. Selvyn Fernandes attended a one week FDP on “R programming”, organized by Fr. C. Rodrigues Institute of Technology, Vashi, from 22nd - 26th May 2020.
- Prof. Anisha Cotta, Prof. Mohini Naik, Prof. Priyanka Padiyar, Prof. Yeshudas Muttu, Prof. Deron Rodrigues attended a one week FDP on “Artificial Intelligence”, organized by Department of Information Technology, Universal College of Engineering under IQAC in collaboration with Brain O Vision Solutions India Pvt. Ltd. & National Youth Council of India, from 22th May to 26th May, 2020..
- Prof. Anisha Maria Cotta, Prof. Mohini Naik, Prof. Kimberly Morais, Prof. Priyanka Padiyar, Prof. Selvyn Fernandes attended a one week FDP on “Signal Image & Video Processing: A practical Approach”, organized by Govt. College of Engineering Karad, Maharashtra, from 26th May to 30th May, 2020..
- Prof. Anisha Cotta, Prof. Mohini Naik, Dr. Shreyas Simu, Prof. Priyanka Padiyar attended a one week FDP on “Data Science”, organized by Department of Information Technology, Fr. Conceicao Rodrigues College of Engineering, Mumbai, from 26th May to 30th May, 2020.
- Dr. Varsha Turkar, Prof. Yeshudas Muttu, Prof. Anisha Cotta, Prof. Mohini Naik, Prof. Priyanka Padiyar, Prof. Mathilda Colaco, Prof. Flavia Leitao, Prof. Deron Rodrigues attended a one week FDP on “Evolution from offline to online Teaching”, organized by , from 30th May- 3rd June 2020.
- The ETC Faculty members attended a number of Webinars on various topics to upgrade their knowledge in various domains during the Pandemic period.

➤ Talk on Recent Advancement in wireless Communication



L.D. Samant Memorial high school, Porvorim Goa organized talk on Recent Advancement in wireless Communication for the students of std. VIII, IX & X on 15/02/2020. In regards to this, Headmaster of the school, Mhalsekant Deshpande invited Prof. Mohini N. Naik, Asst. Professor of ETC Engineering, DBCE, to brief students about wireless communication. Students were given a brief introduction on wireless communication and its applications. Students were eager to know about ISS (international space station) and astronauts living in the ISS.

➤ Talk on Space Technology

Government high school, kalay sanguem Goa organized talk on Space Technology, for the students of std. VIII, IX & X on 15/02/2020. Goa Samagra Shiksha Abhiyan under the Directorate of Education, Goa has implemented National Skills Qualifications Framework (NSQF) course in the school namely Electronics & Hardware. In regards to this, Headmaster of the school, Alpa Dessai invited Prof. Mohini N. Naik, Asst. Professor of ETC Engineering, DBCE, to brief students about Space technology and its recent trends.



UPCOMING EVENTS

- “PCB Design and Fabrication” workshop for faculty members in July 2020
- “Electromagnetics workshop series 1” for SE ETC on 11th July 2020
- “Electromagnetics workshop series 2” for SE ETC on 25th July 2020
- “Webinar Series on HAM Radio” for Student’s Satellite club in Aug. 2020
- “Technical Paper Writing” Workshop for TE & BE ETC students in Aug.2020
- “Introduction to Cryptography”, for TE ETC on 12th Sept. 2020
- “Introduction to Scilab” Workshop for TE ETC students in Sept.2020
- “Advanced Node JS” Workshop for BE ETC students in Sept.2020
- “Digital VLSI Design” Workshop for TE ETC students on 24th Oct. 2020