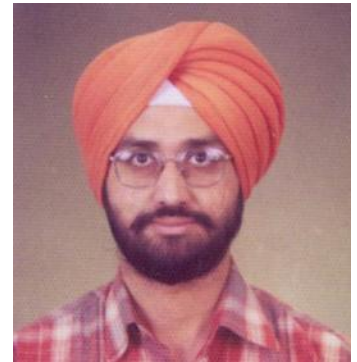


Message by HOD

The Department of Electronics and Communication Engineering, established in 1981, is one of the most dynamic departments of Guru Nanak Dev Engineering College. It was the first major diversification initiative by the college, 25 years after its establishment. The department is currently running Bachelors and Masters of Technology courses in Electronics and Communication Engineering and has around 10 scholars enrolled for doctorate in areas like Antenna Design, VLSI, Optical communication etc. Ever since its inception, the department has been the hub of academic excellence through some great teachers who have laid a sound foundation as well as the cream of students of the region, who have spread their wings all over the globe. Since, its inception, the department has been giving a great emphasis on the overall development and improvement of its students and staff.



Student Corner

IETE Students' Forum (ISF) of the department of Electronics and Communication Engineering regularly organises technical and non technical events. IETE-SF banner, the department also organizes a technical symposium "e-Vision" every year, in which various events like paper presentation, project presentation, technical collage making, quiz competition etc. are conducted.

Glimpses of e-Vision'15



Lamp Lighting Ceremony

In e-vision'15 **Sh. S.K Angra, Chairman IETE Chandigarh** and **Dr. Neelesh Kumar, Honorary Secretary IETE Chandigarh** were invited to grace the event with their philosophical thoughts. Staff and students worked with the great enthusiasm in organising this symposium. Nearly 200 students participated in various events showcasing their talent and knowledge in domains like technical writing, circuit making etc. Also prizes were given to all the winners and participation certificate to all the participants.



Standing L to R: Prof. Narwant Singh, Prof. Munish Rattan, Dr. Neelesh Kumar, Sh. S.K Angra, Dr. M.S Saini, Dr. S. S. Gill, Prof. B. S Dhaliwal, Releasing Proceedings of eVision'15



e-Vision A quarterly newsletter of the Department of Electronics and Communication Engineering, GNDEC



The prime intent of this ISF is to enhance the students' technical merit and implant the habit of deeper learning and research. Apart from this, department also motivates its students to participate in various national and international technical and cultural events, symposiums etc.

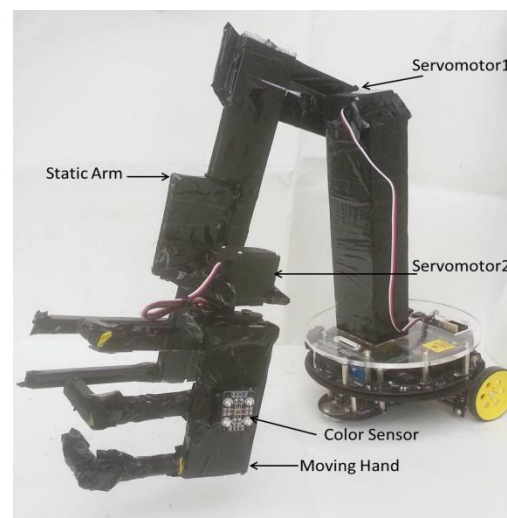


e-Yantra 2015-2016

Recently, third year students of our department participated in **e-Yantra 2015-2016** and they bagged 11th position overall. It's a competition organized every year by IIT Bombay in which they select top 300 teams from all over India via a qualifying test. The qualifying test was conducted in August 2015 in which four students from our Department represented our college as a team. They were shortlisted in top 300 teams and were assigned different themes. Our students were assigned the theme: Hotel Guest Services. They submitted all 4 tasks online (i.e theme analysis, theme implementation, video demo submission & documented code submission) and successfully completed the project.



Team Members(From L to R): Jaspreet Singh, Kirandeep Kaur , Kartik Bansal, Jaskaran Singh



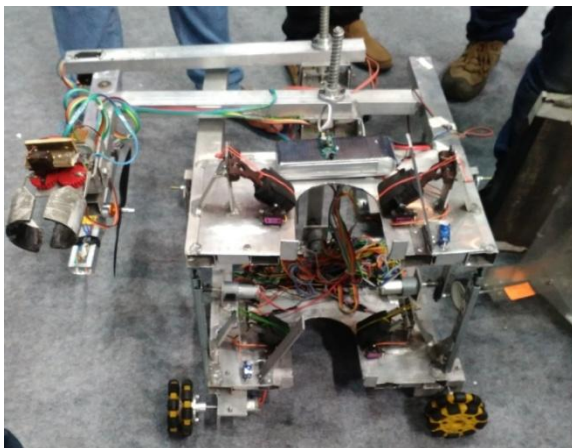
Project theme: Hotel Guest Services

It's again a matter of pride for us as our GNDEC students team "**The Artisans**", participated in the national robotic contest ABU ROBOCON 2016. It was held from 3-5 March **MIT Group of Institutions, Pune** on the theme "*Clean Energy Recharging the World*".



Team Members from ECE- Second year students: Manavjit singh, Manpreet singh, Simranjit singh, Harkanwal singh, Maninder singh, Bikramjit singh; **Third year students:** Dinkar Mudgil, Banpreet singh

The competition was divided into three stages comprising technical and safety inspection, setting of robots and league tournament. It is an honour for us that GNDEC was the only team from Punjab among 105 participating teams across the country. There were 8 students from our department in the team from GNDEC. Further, the contest was aired on **DD National** and you tube. Our students were able to clear the first two stages of the contest and the Artisans marked their presence with fully autonomous robots as, the competition allowed to operate the robots in either semi-autonomous or fully autonomous mode.



Achievements of students in sports activities outside the Institute

Our students not only bring laurels in academics and technical activities, they are equally determined to participate in the field of sports, be it handball, chess, kabaddi, cricket, badminton, swimming etc. They participate in various inter university and inter college tournaments.

SESSION	NAME	ACHIEVEMENT
INTER UNIVERSITY		
2015-2016	Amritpal Kaur	Member PTU Handball Team
2015-2016	Navjeet Singh Gill	Member PTU Handball Team
COLLEGE TEAMS		
2015-2016	Sanjana Arora	Captain College Chess Team
2015-2016	Baljeet Singh	Captain College Kabaddi Team
PTU INTER COLLEGE TOURNAMENTS		
2015-2016	Rahul Rajan	Won Gold in Cricket
2015-2016	Shubham Kumar	Won Gold in Cricket
2015-2016	Amritpal Kaur	Won Gold in Handball
2015-2016	Taranpreet Kaur	Won Gold in Handball
2015-2016	Sanjana Arora	Won Bronze in Chess
2015-2016	Parneet Kaur Dhindsa	Won Bronze in Chess
2015-2016	Gaurav Tyagi	Won Bronze in Badminton
2015-2016	Baljeet Singh	Won Bronze in Kabaddi
2015-2016	Raghav Kumar Jha	Won Bronze in Kabaddi
2015-2016	Karan Singh Dhanjal	Won Bronze in Swimming

Activities and achievements by faculty

Department regularly organizes workshops and faculty development programs, providing chance for understanding and gaining knowledge about the latest developments in various fields of ever-changing world of technology. Recently department has conducted a short term course on **ADVANCES IN OFC TECHNOLOGY** from April 25 - 29, 2016, in Association with NITTTR, Chandigarh.

The course was inaugurated by Dr. M.S Saini, Director GNDEC which was followed by a welcome address by Dr. S. S. Gill, HOD, Dept. of ECE, GNDEC. The prime intent behind this one week short term course was to provide an opportunity to the participants to learn and appreciate the technology options and developments taken place during past decades in the field of OFC targeting the recent trends in telecommunication.



Dr. B.C. Choudhary, course co-coordinator from NITTTR Chandigarh gave the brief overview about the course. He threw light on how OFC technology has revolutionised the world and its further advancement scope. Dr. Baljeet Kaur, course co-coordinator, GNDEC gave formal vote of thanks to all participants.



Around 50 faculty members from different colleges in the region participated in this course. Experts from NITTTR, NITs, BSN and other renowned academic institutions around the region besides faculty from GNDEC, Ludhiana delivered expert talks. During this one week course, the participants from various institutes across the region got an opportunity to get insight into the OFC technology and all the latest advances in the field. A special visit to BSNL Exchange, Ludhiana was also arranged to make participants familiar with practical implementation of OFC technology in modern communication era.

A valedictory function was organised on the conclusion of the course. Dr. Ajay Sharma, Director, NIT, Delhi graced the occasion as the Chief Guest. Dr. S.S. Gill, HOD, Department of ECE welcomed the Chief Guest, other dignitaries and the participants to the valedictory function.

Dr. B.C. Choudhary, course co-coordinator from NITTTR Chandigarh congratulated the participants on successful completion of the course. He also mentioned that all possible efforts were put in to make this course a very fruitful exercise by designing the right course contents and imparting knowledge through excellent faculty.

The function ended with formal vote of thanks by Dr. Baljeet Kaur, course co-coordinator, GNDEC.

The department also organised TEQIP-II sponsored faculty development programme on **“Technology and Management for Electronic Product Design”** from May 2, 2016 to May 13, 2016. The course aimed to impact advanced knowledge and skills in the electronic product design and associated management issues.



This TEQIP sponsored two week Faculty Development Program was inaugurated by Dr. A.K. Paul, Vice-Chancellor, DAV University. Dr. M. S. Saini, Director, GNDEC was also present on this occasion. Dr. S.S. Gill, HOD, Department of ECE welcomed the Chief Guest, other dignitaries and the participants to this program. The prime intent behind this two week FDP was to impart knowledge to participants regarding the subject of product design which has become highly relevant for academicians, engineers as well as aspiring entrepreneurs. Dr. Amod Kumar, Head, Business planning and promotion group, CSIO, Chandigarh also graced the occasion with his presence and threw some light on Signal Processing Applications in Biomedical Instrumentation.



Dr. J.N. Jha, TEQIP coordinator, GNDEC, highlighted on how the TEQIP fund is utilized in modernizing the laboratories of various departments to cope with the current needs of the industry and development of faculty. Dr. Munish Rattan, program coordinator, GNDEC gave the brief overview about the course. In his remarks, he mentioned that how electronic product design and management has become such a crucial process which needs to be considered for the long term roadmap of the product in the dynamic market.



A valedictory function was organised on the conclusion of this two week Faculty Development Program on “Technology and Management for Electronic Product Design” Dr. A. Patnaik from IIT, Roorkee graced the occasion as the Chief Guest. He also shared his expertise on antenna designing for MIMO systems and reconfigurable antennas.



Around 50 faculty members from different colleges in the region participated in this course. Experts from IITs, CSIO Chandigarh, CDAC Mohali and other renowned academic institutions around the region besides faculty from GNDEC, Ludhiana delivered expert talks in during the course of this program.

Dr. Munish Rattan, program coordinator, GNDEC also mentioned that all possible efforts were put in to make this course a very fruitful exercise by designing the right course contents and imparting knowledge through excellent faculty.

The function ended with formal vote of thanks by Prof. Narwant Singh Grewal, program coordinator, GNDEC.

Expert Lectures Delivered by ECE Faculty

Dr. Sandeep Singh Gill delivered an expert lecture in International Conference on Innovative Trends in Electronics Engineering (ICITEE 2016) held on January 29th, 2016 Punjabi University, Patiala.

Conference Publications by ECE Faculty (Jan 2016 onwards)

S.No.	Name of Author(s)	Title of Paper	Name of Conference	Place of Conference	Date of Conference	National / International
1	Sudarshana Jilowa, Sandeep Singh Gill, Gurjot Kaur Walia	Design of 3C-SiC Symmetric and Asymmetric Double Gate MOSFET	2nd IEEE International Conference on VLSI Systems, Architecture, Technology and Applications (VLSI SATA 2016)	Amrita School of Engineering, Amrita Vishwa Vidyapeetham Bengaluru Campus, India	January 10-12, 2016	International

2	Jaidev, Sandeep Singh Gill, Navneet Kaur	Performance Analysis of 20 nm Si and Ge channel based Pentagonal and Trapezoidal NWT	International Conference on Mathematics Physics & Allied Sciences	Carmel College, Margao, Goa, India	March 3-5, 2016	International
3	J. Kaur, Balwinder Singh Dhaliwal and Sandeep Singh Gill	Handwritten Gurmukhi Character Recognition using PSONN,	International Conference on Advancements in Engineering & Technology (ICAET-2016)	Sangrur, Punjab, India	2016	International
4	Aysha Sharma and Balwinder Singh Dhaliwal	Digital Filter Design using Soft Computing Approaches	International Conference on Innovative Trends in Electronics Engineering	Patiala, India	January 29, 2016	International
5	Nitika Sharma, Balwinder Singh Dhaliwal	Design of A Fractal Slot Antenna for Rectenna System and Comparison of Simulated Parameters for Different Dimensions	National Conference on Recent Innovations in Science & Engineering,	Hamirpur, India	March 04-05, 2016	National
6	Kanwarpreet Kaur, Prabhjot Kaur, Pooja Arora, Gurjot Kaur, Jaspreet kaur	A Review on Classification and Detection Techniques of Brain Tumor	Recent Trends in Environment, Science and Technology(RTSET-2016)	Rayat Bahra, University, Mohali, India	11-Mar-16	National

Faculty as Participant in Workshop/STTP/FDP/STC(Jan 2016 onwards)

S.No.	Name of Faculty	Name of Workshop/ STTP/ FDP/ STC	Name of Organizing Department/ Institute	Place / Venue	Name of Sponsoring Organization/ Department	Date	Duration
1	Narwant Singh	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
2	Balwinder Singh Dhaliwal	STC on "Open Source Technology"	NITTTR, Chandigarh and Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	NITTTR, Chandigarh	January 4-8, 2016	One week
3	Munish Rattan	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
4	Baljeet Kaur	STC on "Open Source Technology"	NITTTR, Chandigarh and Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	NITTTR, Chandigarh	January 4-8, 2016	One week
5	Harminder Kaur	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
6	Navneet Kaur	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks

7	Navneet Kaur	Producing Elegant Technical Research Reports Efficiently	Deptt. of Civil Engg. And Computer Science Engineering, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	TEQIP-II	January 19-20, 2016	Two days
8	Chahat Jain	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
9	Haminder Kaur Aulakh	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
10	Sapanjot Kaur	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
11	Jasmeet Kaur	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
12	Simranjit Kaur	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks

13	Kirandeep Kaur	STC on "Open Source Technology"	NITTTR, Chandigarh and Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	NITTTR, Chandigarh	January 4-8, 2016	One week
14	Nishu Kansal	STC on "Open Source Technology"	NITTTR, Chandigarh and Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	NITTTR, Chandigarh	January 4-8, 2016	One week
15	Naazia Makkar	FDP on "Waste Management and Optimization Techniques"	Production Engineering Department, Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	Organization : TEQIP -II	December 27,2015- Januray 5,2016	Two weeks
16	Jaspreet Kaur	STC on "Open Source Technology"	NITTTR, Chandigarh and Guru Nanak Dev Engineering College, Ludhiana	Guru Nanak Dev Engineering College, Ludhiana	NITTTR, Chandigarh	January 4-8, 2016	One week

List of Journal Publications by ECE Faculty(Jan 2016 onwards)

S No.	Name of Author(s)	Title of Paper	Name of the Journal	Volume No. / Issue No./ Page numbers/ ISSN	Month, Year of Publication	National/ International	Refereed/ Non-Refereed	DOI
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1	Jugminder Kaur, Sandeep S. Gill, and Balwinder Singh Dhaliwal	Secure Trust Based Key Management Routing Framework for Wireless Sensor Networks	Journal of Engineering (Hindawi)	Vol. 2016, pp. 1 – 9.	2016	International	Refereed	http://dx.doi.org/10.1155/2016/2089714
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Educational tours and Industrial visits

Every semester, the department organises educational tours or industrial visits for its students. This not only acts as a source of revival for students but also gives them a chance to learn and enjoy at the same time. This semester a tour to Doordarshan Kendra, Kasauli (1st April, 2016) and All India Radio Station, Dharamshala (12th April, 2016) was organised for 2nd year and Final year B.Tech students respectively.