



## Faculty/Staff/ Development Programs/Administrative Training Programs (2021-22)

S.No.	Name of FDP/SDP/ATP	Page No.
1	IoT and Artificial Intelligence in Industry 4.0	2 - 14
2	Waste Management & Environmental Protection for Sustainable Development	15 - 24
3	Classroom Learning Management System Using Collpoll	25 - 28
4	Microsoft Office	29 - 33
5	Cultivating Skills and Knowledge for College Gardeners	34 - 36
6	Advance Techniques in Electrical Maintenance	37 - 38



# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

## About FDP

Today, everyone is focus on internet of things (IoT) and artificial intelligence (AI). Statistics shown a huge data will be grown and most of devices to be connected on internet by 2025. IOT is the concept of everyday object from machine to wearable devices using built in sensors to gather data and take action on the data across a network and AI eliminates human intervention wherever necessary and possible. This FDP is aimed at giving live training & knowledge to the faculty members on various aspects of IOT & AI. Industry 4.0 refers to a new phase in the Industrial Revolution that focuses heavily on interconnectivity, automation, machine learning, and real-time data. Industry 4.0, also sometimes referred to as IOT or smart manufacturing, marries physical production and operations with smart digital technology, machine learning, and big data to create a more holistic and better-connected ecosystem for companies that focus on manufacturing and supply chain management.



## Expected outcomes

The course will be extremely beneficial for the faculty, researchers and professionals from diverse discipline.

- ★ Understanding the nature and development of Artificial Intelligence in promoting transformative manufacturing.
- ★ FDP introduces fundamentals of IOT, different industry 4.0 Models, applications and research outcomes addressing the theoretical and practical aspects on "Artificial Intelligence and Industry 4.0"
- ★ An opportunity to explore the implications of Industry 4.0 in a globally connected supply chain.
- ★ Implementation of IOT and automation for conventional manufacturing.
- ★ Generate realistic and workable ideas for Industry 4.0.



## About us

Baba Farid Group of Institutions, inception in the year 1994 under the guidance of Baba Farid Vidyak Society, is one of the prominent education hubs in India. Founded, led and managed by a reputed educationist Dr. Gurmeet Singh Dhalwal (Chairman), the institution is delivering the academic excellence with complete panache. Being the Leading Educational Institute of the Region, it is a preferred destination of Indian and International learners to attain their career goals. The Institute offers more than 50 Regular Courses & has a strength of more than 10,000 students not only from State of Punjab, But also from Different parts of country.

Baba Farid College of Engineering and Technology is managed by Baba Farid Vidyak Society founded in 1993 under the kind patronage of prominent educationists of Malwa Region of the State of Punjab. The society aims to provide quality education to prepare the young minds to face the competitive world on all fronts. The institute offers a host of hi-tech ultra-modern facilities to ensure quality education for its students. The institute is being managed efficiently by its Chairman Dr. Gurmeet Singh Dhalwal, an eminent educationist and Bharat Jyoti Awardee. As a Premier Educational Institute, Baba Farid College of Engineering & Technology emphasizes on imparting practical skills to the students to make them ready to take up the challenges in this ever-evolving field of digitalized technical education. With the support of up to date labs, excellent infrastructure, and qualified faculty, the college is committed to provide quality education. The college always takes its best foot forward for motivating its students towards research by organizing International Conferences, Seminars and Guest Lectures in the campus. The college runs under-graduate courses of Bachelor of Technology in the disciplines of Computer Science & Engineering, Electronics & Communication Engineering, Civil Engineering, Mechanical Engineering & Electrical Engineering & Post-graduate course of Master of Technology in CSE.

## About Department

The Department of Electrical Engineering, BFECT was established in 2010 under the aegis of Baba Group of Institutions. The motive of the department is to impart quality education in the field of Electrical Engineering with innovative teaching methodology with the blend of traditional practices. Academic Curriculum is a perfect balance between theoretical concepts and practical aspects. The department always focuses on Hands-on practice, projects, field trips and industry-academic interaction together to make our students highly sought-after graduation. Along with Academic, the students here are encouraged to engage themselves in extra-curricular and co-curricular activities which are essential for personality development, nurturing of team spirit and development of professional ethics. Faculty members of the department maintain their links with the various installation & commissioning agencies for consultancy activity. Electrical Engineering program at Baba Farid College of Engineering and Technology is excellently suited to meet the ever-changing requirements of engineers with courses that combine the Electrical Machines, Power System, Power Plant Engineering, Power System Analysis and computational techniques with engineering. In addition, undergraduates are exposed to the concepts of design including the application of (ETAP Software) techniques. The program also considers the need for real-world exercise for which throughout the program time to time entails Industrial visits, live projects, and a host of hand-on-practice based assignments that give students an opportunity to apply their theoretical concept & knowledge to problems faced on the ground.

## AICTE-MRSPTU

Sponsored

Six days Online

Faculty Development Programme (FDP)

on

IOT & Artificial Intelligence in Industry 4.0

17<sup>th</sup>-22<sup>th</sup> January, 2022



being organized by

Department of Electrical Engineering

**BABA FARID COLLEGE  
OF ENGINEERING AND TECHNOLOGY**

Bathinda - 151001 (Punjab)



## Content of the Programme

- ★ Dynamic Implementation of IOT and AI Approaches for Research
- ★ Open Platforms for IOT and Smart Applications
- ★ Industrial Automation using IOT Frameworks
- ★ Free and Open-Source Frameworks for IOT and Industry 4.0
- ★ Challenges and opportunities in IOT.
- ★ To introduce fundamental of IOT and AI with its applications
- ★ The program would help the participant to understand the key concepts and advance understanding on IOT and AI
- ★ To explore various research opportunities and challenges in the field of IOT, AI and its applications.
- ★ At the end of the FDP, the participant is able to understand the technologies for future application.



Patron  
**Dr. Gurmeet Singh Dhalwal**  
(Chairman BFGI)

Chairperson  
**Dr. Jayoti Bansal**  
(Principal)

Co-Chairperson  
**Dr. Tejinderpal Singh**  
Saroo (Dean R&D)

Programme Coordinator  
**Er. Harsimran Singh**  
(HoD, Electrical Engineering)

Programme Co-coordinators  
**Er. Hardeep Singh**  
(Dean of student welfare)  
**Er. Abhi Garg**  
(Assistant Professor, Electrical Engineering)  
**Er. Satvir Singh**  
(Assistant Professor, Electrical Engineering)

Organizing Committee  
Er Tanu  
Dr Nimisha Singh  
Er Pushpinder Sharma  
Er Balwant Singh  
Er Hafkamaldeep Kaur  
Er Shilpy Goyal  
Er Gurpreet Kaur  
Er Rajpreet Kaur Er Rishav  
Er Manpreet Kaur  
Er Sandeep Singh

## Resource Persons

Eminent personalities with rich experience and standing in their respective domain from reputed institutions like IIT/NIT/NITTR/TIET/ Central University and Industries are resource persons in this programme.

## Who can attend?

The program is open to all faculty members and Research Scholars of AICTE/UGC affiliated institutes/ Universities. Maximum 100 participants are allowed to attend the programme.

## Registration

There is no registration fee. Interested persons can attend the Programme by completing the registration through the following link or scan QR code.

## Registration QR Code



## Registration Link: -

<https://forms.gle/wR4DRuyeos7xGzwk9>

## Join WhatsApp Group

<https://chat.whatsapp.com/I4ozK6CQCnHcV94YellZ1u>

## Important Dates

Last Date for Registration : 10<sup>th</sup> January 2022

Confirmation of Participation : 15<sup>th</sup> January 2022

## Test & Certification

An online test shall be conducted by coordinator at the end of the program. Certificates shall be awarded to the participants with 80% attendance and with a score of minimum 60% marks in online test to be conducted on the last day of the program.

## Duration

The Programme will be conducted in **online mode** from 17th-22th Jan, 2022 having a total of 16 sessions each of 90 minutes duration

## Contact Persons

Programme Coordinator:  
**Er. Harsimran Singh**  
**+91-95011-15491**

Programme Co-coordinator:  
**Er Abhi Garg**  
**+91-95011-15435**  
**Er Satvir Singh**  
**+91-95011-15446**

Email: [hodec.bfct@gmail.com](mailto:hodec.bfct@gmail.com)  
Website: [www.bfct.com](http://www.bfct.com)

**BABA FARID COLLEGE  
OF ENGINEERING & TECHNOLOGY**

Bathinda (Punjab) - 151001, [www.bfct.com](http://www.bfct.com)



## Faculty Development Programme

On

## IoT and Artificial Intelligence in Industry 4.0

Sponsored by AICTE & MRSPTU

17<sup>th</sup> – 22<sup>nd</sup> Jan 2022

Six days online faculty development program sponsored by AICTE & MRSPTU on “IoT & Artificial Intelligence in Industry 4.0” organized by Department of Electrical Engineering, Baba Farid College of Engineering & Technology, Bathinda from 17th-22nd January. More than 300 registrations were received across 24 States of India. The program was described important transformation is necessary to accompany the volumes of data produced by the Internet of things and need of network identification because in modern ADN there is rapid growth in demand side technologies and distributed energy resources. Main topics discussed in the program was related to Applications of Machine learning, Network Identification in Modern PS through AI, AI Based adaptive control technique for grid integrated, AI based adaptive control technique for solar power Electric vehicle, Emerging trends in AI & IoT, Introduction to Internet of Robotic things (IORT), AI & Robotics in Industry 4.0, Solar MPPT Tracking using Artificial Intelligent Technique, IOT and Cyber Security, Future of IOT (Predictive Analytics), Efficient Intelligent Control for Electrical Management System, National Educational Policy (An Overview), Explore various research opportunities and challenges in the field of IOT, AI and its applications, Free and Open-Source Frameworks for IoT and Industry 4.0, AI/IOT Application in Power System, Real Time Streaming Libraries for IoT and Industrial Applications.

### Day 1: Monday, January 17th, 2022

#### Resource Person –

1. Prof Dr. Buta Singh Sidhu, Vice Chancellor, MRSPTU, Bathinda.
2. Col. B. Venket, Director, Faculty Development Cell, AICTE, New Delhi.
3. Dr. Suhas M. Kakade, COE, Pune
4. Dr. Priyank Shah, University of Warwick, UK

**Session 1<sup>st</sup>:** - The program was inaugurated by the Chief Guest Prof Dr. Buta Singh Sidhu, Honorable Vice Chancellor, Maharaja Ranjit Singh Punjab Technical University, Bathinda. He addressed the audience with great enthusiasm and discuss emerging AI & IoT trends in different sectors alongwith related research in these sectors. The Guest of Honour Col. B. Venket, Director, Faculty Development Cell, AICTE, New Delhi graced the occasion and congratulated BFCET for organizing FDP on IoT &



Artificial Intelligence in Industry 4.0. Er. Harsimran Singh (Convenor FDP) briefed the importance of faculty development program to all participants. Dr. Tejinder Pal Singh Sarao (Dean R&D, BFCET) delivered welcome speech to all the faculty members as well as delegates.

**Session 2<sup>nd</sup>: - Dr. Suhas M. Kakade, COE, Pune:** The topic for the second session was Applications of Machine learning. He started the talk by explaining basics of Machine learning by taking few daily life examples. He explained the supervised, unsupervised learning of machine learning. As the session proceeded, he explained the classification of advanced machine learning- Neural network (NN), Convolutional neural networks (CNN), Recurrent neural networks (RNN), Deep Neural Network (deep learning), Generative Adversarial Networks (GAN). He also discussed the applications of Advanced machine learning

Furthermore, he explained the other interesting applications – Text to Image, Text to Video, Scene synthesis from unseen direction, zero shot learning/one shot learning/ few shot learning. He added his collaborations sponsored through IDMRP Grant which is to investigate how well the selected machine learning and deep learning algorithms perform to predict the solar. The explanation of the algorithms and work done used in above project was explained by one of his M. tech students.

Lastly, he also cleared the doubts of participants effectively.

**Session 3<sup>rd</sup>: Priyank Shah [Postdoctoral Research Fellow, University of Warwick, UK]** The topic for the second session was ‘Network Identification in Modern PS through AI’. He started this session that about 2020, an important transformation is necessary to accompany the volumes of data produced by the Internet of Things. After that he talked about the need of network identification because in modern ADN there is rapid growth in demand side technologies and distributed energy resources. After that he talked about the problems related to ADNs i.e. aging of assets, lack of network visibility and controllability because these problems effect various estimation and control operations of modern DMS. Dr. Shah also discussed about why the knowledge of accurate and model is important to be estimated. He further discussed about the objectives of network identification and also its applications. He discussed about the device used in this is phasor measurement unit (PMU) and smart meter. Dr. Shah further discussed about the type of input data i.e. in PMU the data is in the form of voltage phasor and current phasor and in smart meter the input data is in the form of voltage and current magnitude, active and reactive power, and power factor. Then he discussed about the frequency of data update intervals for electricity smart meter. Further he discussed about the network identification with PMU dataset and its problem formulation. Then he explained the detailed process of voltage and current measurements.



At the end of session, he concluded this session that the proposed framework estimates the system architecture of the active disturbance network using synchronous and non-synchronous measurements and the proposed framework accurately estimates the branch parameters and variation in branch parameters for irrespective of the balanced and unbalanced lattice of benchmarked distribution network. The proposed framework accomplishes the identification objectives even with the presence of the noise in D-PMU measurements.

Lastly, he also cleared the doubts of participants effectively.

## Day 2: Tuesday, January 18th, 2022

### Resource Person –

1. Dr. Nishant Kumar, IIT, Jodhpur
2. Dr. Nishant Kumar, IIT, Jodhpur
3. Dr. Mala Kalra, NITTTR, Chandigarh

**Session 1<sup>st</sup>: Dr. Nishant Kumar, IIT Jodhpur** The topic for the first session was “AI Based adaptive control technique for grid integrated”. He started the talk by classification of solar energy conversion system. He added content related to sandstone and grid interface for single phase and three phase system. Dr Nishant discussed about the inverter arrangement in control strategy of solar energy in term of load interface with DC-DC converter in DC micro grid and DC-AC converter for AC loads. As the session proceeded, he explained development of neural network theory-based control technique for solar PV array integrated grid system. In classification of control techniques sir covered d-q control, SDGI based control, LMS/LMF based Control, and Kalman Filter based Control, Space vector filter-based control, moving average filter-based control and orthogonal component-based control. He also discussed ANOVA kernel stochastic gradient descent algorithm to improve the estimation accuracy. He said Kernal tick is used for mapping in high dimensional space, which realizes a linear relationship n between the input signals during mapping into the HDS.

Lastly, he also cleared the doubts of participants effectively.

**Session 2<sup>nd</sup>: Dr. Nishant Kumar, IIT Jodhpur** The topic for the second session was “AI based adaptive control technique for solar power Electric vehicle” First of all she discussed about new technologies and their concerns. After that he talked about e design of an electric driven vehicle that can regenerate power using solar energy technology. If this type of vehicle became a standard commercial vehicle, the demand for fuel would decrease substantially. He said designing this vehicle for practicality is the primary difficulty. The vehicle must be lightweight to minimize the size of the motor required to withstand urban



transport needs. After that he talked about the long-term objective of this project is to design, fabricate and assemble a fully functioning vehicle powered by solar energy, which in the future can be used to compete in the Shell Eco Marathon. He said about the frame design, powertrain, battery research selection and purchase, starting and suspension. He further discussed environmental impact of feasible alternative energy vehicles will have a positive impact on the environment. Since combustion engines never achieve complete combustion, resulting extraneous gases add to the problem of global warming. Electric motors produce zero emissions; therefore, the application of urban electric driven vehicle will dramatically decrease the amount carbon dioxide (CO<sub>2</sub>) contributing to global warming. As the session proceeded, he explained the control of solar power and characteristics of PV Arrays.

At the end of session, he talked about solar PV system of MPPT testing and deterministic optimization algorithm. In which he covers Hill climbing, incremental conductance method, fractional open-circuit voltage, fractional short circuit current, ripple correlation control, discrete-time ripple correlation control, current sweep, DC-Link capacitor droop control and MPPT techniques fuzzy logic based MPPT control. Lastly, he also gives the answers queries raised by the listeners.

**Session 3<sup>rd</sup> - Dr. Mala Kalra, NITTTR, Chandigarh:** The topic for the third session was Emerging trends in AI & IoT. She started session that how the convergence of AI & IoT can redefine the way industries function. So, emerging AI & IoT trends in three sectors alongwith related research in these sectors. She further explained that IoT is all about embedding sensors into machines, vehicles that continuously generate data streams through internet connectivity. She explained that IoT applications follow five basic steps create, communicate, aggregate, analyze and act. Dr. Kalra explained about cloud computing that cloud services facilitates instantaneous databases, storage and the benefits of cloud computing is scalability and data mobility. It also does not involve huge initial investments but if you work with real time application then cloud will be challenging such as health monitoring because it creates delay for result which was not acceptable. Then she moves to fog/edge computing which is providing data processing capabilities & storage facilities. Fog computing is a distributed computing paradigm that acts as an intermediate layer between cloud data centers & IoT devices whereas edge computing enables data processing at the end devices.

She further explained that the impact of blending AI & IoT on three major sectors i.e. agriculture, healthcare and industrial automation. AI & IoT in agriculture will increase the quantity and quality of production. With the help of AI we can make agricultural robots that reduce human efforts and save time by performing multiple tasks at one time, monitor and harvest crops more effectively.



Dr. Kalra further explained that the most useful application of AI in healthcare is that the remote patient monitoring (RPM) systems use wearable's to monitor the condition of monitors, useful for monitoring the corona patient and many more. At last, she said that in manufacturing industry AI automate complex tasks, prediction of machine failure and for quality checks and then she described about digital twin which is a digital representation of a physical object in operation.

### **Day 3: Wednesday, January 19th, 2022**

#### **Resource Person –**

1. Dr. KS Nagla, NIT, Jalandhar
2. Dr. Amandeep Kaur, CUP, Bathinda
3. Dr. Shimi S.L, NITTTR, Chandigarh

**Session 1<sup>st</sup>: - Dr. KS Nagla:** The topic for the session was Introduction to Internet of Robotic things (IoRT). He started the talk by explaining importance of Robotics by taking few daily life examples- swimming robots, Flying Robots, Robotic Balls, Swarm robots, Snake robots, Micro robots, Nano robots, crawler robots, Hybrid Robots, etc. He further explained the classification of robots in terms of applications- Space Robots, Military Robots, medical robots, industrial robots, service robots, etc. As the session proceeded, he discussed the world robot report 2021, according to this report, the use of industrial robots in factories around the world is accelerating at a high rate: 126 robots per 10,000 employees is the new average of global robot density in the manufacturing industries – nearly double the number five years ago (2015: 66 units).

Furthermore, he explained the other interesting biological background based on AI .IoRT supports artificial intelligence (AI) in robotics, machine learning, perception, sensor fusion and swarm technologies, SLAM, Localization, mapping etc. will provide the next phase of development of IoT applications. While artificial intelligence and machine learning allow/empower these machines to function using decision making and learning algorithms instead of programming. Then he talked about the experiment - IoRT: sensor Fusion. Mapping is done in 2D ad 3D.

Lastly, he also cleared the doubts of participants effectively.

**Session 2<sup>nd</sup>: Dr. Amandeep Kaur Central University of Punjab, Bathinda,** the topic for the second session was “Artificial Intelligence & Robotics in Industry 4.0” First of all she discussed about Industrial revolution in which she covers the industrial revolution of manufacturing with steam and waterpower and mass production assembly lines using electric power in 1st and 2nd revolution. In 3rd and 4th revolution she covered automated production using electronics, plc IT system and robotics and autonomous decision



making of cyber physical system using machine learning through cloud technology. After that she talked Artificial intelligence in the fourth industrial revolution is beginning to live up to its promises of delivering real value necessitated by the availability of relevant data, computational ability, and algorithms.

Therefore, this study sought to investigate the influence of artificial intelligence on the attainment of Sustainable Development Goals with a direct focus on poverty reduction, goal one, industry, innovation, and infrastructure development goal 9, in emerging economies. She said Industry 4.0 or the fourth industrial revolution (4IR) is gaining a lot of attention particularly on its potential impact on humanity Schwab argued that 4IR will change how human beings live, work and how the economies work as well as how we are governed

At the end of session, she talked industry 4.0 introduces the self-automation method, self-configuration method, self-diagnosing and intelligence decision making. She explained the use of ICT, sensor technology and robotic technology make it possible to record the production process of each element (instead of sampling and control) and detecting errors that occur during the process.

Lastly, she also give the answers queries raised by the listeners.

**Session 3<sup>rd</sup> - Dr. Shimi S.L:** The topic for the session was Solar MPPT tracking using artificial intelligent technique. She started her session that there are two basic approaches in maximizing the power extraction using automatic sun tracker and searching for the MPP conditions. For the maximum power she said firstly take the height of projectile that is fired straight up is given by the motion equations. She explained that by the calculus technique we can find out the maximum peak. Then she further explained about partial shading of solar panels. Dr. Shimi explained the I-V & P-V characteristics of photovoltaic cell. Then she explained the mathematical modeling by taking three equations by taking solve is equal to zero, positive and negative. She described the MPPT model of PV system. Then she explained buck converter and list of parameters of buck converter. Then she compared the results with experimental results inside the laboratory with like vikram solar.

Dr. Shimi explained about the simulation model of MPPT solar and efficiency of MPPT solar. She did this experiment with different algorithms and compared these results and take that results which gave maximum efficiency. She further played video of her laboratory work that how the system works and also explained the simulation model. Then she further explained the artificial intelligence fuzzy logic toolbox by showing some experiments and explained about adaptive neuro fuzzy inference system (ANFIS).



Lastly, she also cleared the doubts of participants effectively

## **Day 4: Thursday, January 20th, 2022**

### **Resource Person –**

1. Dr. Rajinder Kumar, NIT, Kurukshetra

**Session 1<sup>st</sup>: Dr. Rajinder Kumar NIT, Kurukshetra** The topic for the second session was “Future of IOT (Predictive Analytics)” First of all she discussed about new technologies and their concerns. After that he talked Enterprises and service providers have been looking at IoT as a key enabler to drive digital transformation and to unlock the operational efficiencies. Advances in Artificial Intelligence coupled with ubiquitous connectivity, and real-time communications are enabling exponential growth in efficiencies generated by IoT. As machines and products have started communicating with each other without any human intervention, the real value of data is getting generated through better and faster decision-making, He said Emerging technologies such as Internet of Things (IoT) are shaping our lives and disrupting the traditional businesses at a rate of change never seen before in the history. Enabled by exponential increase in computing power and availability of large amount of data, machines are fast learning to replace humans in several areas. This “intelligence” is moving away from central server farms into devices and things that will soon become a part of our everyday lives. These devices will potentially negotiate their own way in our world via “smart contracts” and without any significant human intervention

At the end of session, he talked about Generative Adversarial Networks based on strategy where two different networks are pitted against one another and two networks in in learning battle. In goal of GAN he said one of two networks creates new samples that are so close to training data that other network.

Lastly, he also gives the answers queries raised by the listeners.

## **Day 5: Friday, January 21st, 2022**

### **Resource Person –**

1. Dr. Amit Kauts, GNDU, Amritsar
2. Dr. Gaurav Kumar, Director, MRCS

**Session 1<sup>st</sup>: - Dr. Amit Kauts:** The topic for the session was ‘National Education Policy 2020 (An Overview)’. He started the talk by asking questions related to national education policy as what participants know before about it, what kind of knowledge they have related to it. After that he talked about new school education structure: - Foundational stage (age 3-8), preparatory stage (8-11), middle stage (11-14) and secondary stage (14-18). He further explained the classification of National



Coordinators- UGC (Non technology post graduation degree programme), NPTEL, IIT Madras (technical/ engineering UG & PG degree programme), CEC (Non technology under graduation degree programme), IGNOU (diploma and certificates programme), NCERT (School education, program from 9th to 12th), NIOS ( out of school children educational programmes), IIM banglore (Management programme), NITTTR( Teacher training programme).

Furthermore, he explained the other interesting subjects which are now taught in India as a priority basis which are Artificial intelligence, design thinking, holistic health, organic living, environment education, global citizenship education, mathematics. Then he talked about the institutional restructuring and consolidation.

Lastly, he also cleared the doubts of participants effectively.

**Session 2<sup>nd</sup>: - Dr. Gaurav Kumar:** Dr Gaurav Kumar, Founder Director and First Promoter of Magma Research and Consultancy Services, India. His Qualifications integrate MCA, M.Phil. (Computer Science), M.Tech. (I.T.), Ph.D. (Computer Science), LL.B. and IBM Certified Associate Developer. He obtained the International Certifications in Data Science, Python, Blockchain Programming, Machine Learning, Software Testing and related technologies from corporate giants including IBM, Google, Accenture and many others. Dr Kumar possesses more than 18 years experience in Teaching, Industry and Research. He delivers the Practical Hands-On Sessions on recent technologies in Workshops, Faculty Development Programmes (FDPs), Short Term Courses (STCs) and Technical Events as Resource Person in various states of India.

### Day 6: Friday, January 21st, 2022

#### Resource Person –

1. Dr. Vedantham Lakshmi, Srinivas, IIT Dhanbad
2. Valedactory

**Session 1<sup>st</sup>: Dr. V. Lakshmi Srinivas, IIT Dhanbad.** The topic for the session was, ‘AI/Iots applications in Power system’. He started the talk by explaining the advances in power systems and power system-intelligent control of grid interfaced and off-grid DG/PV systems.

After that he explained the typical configuration of power system-explaining the terms state estimation, visualization, energy management functions, communication input/output controllers transfer data to computers, data collected at remote terminal units. Furthermore, Dr. talked about traditional power



systems and why power systems is shifted to smart grids. He said there are challenges of today's evolving electricity grid which are integration of renewable energy sources into main grid, renewable energy sources are located far away from load centres, conventional energy sources are getting retired, introduction of power electronics converters in the grid and increase in global demand of electricity.

As the session proceeded, he talked about the control center of power system and its functions- state estimation, economic dispatch, optimal power flow, unit commitment, load forecasting and security assessment. After that he mainly focused on system monitoring of the power system and its key feature of a smart grid, GPS-synchronized phasor measurement units and communication technologies enable advancements in system monitoring.

Lastly, he also cleared the doubts of participants effectively.

**Session 2<sup>nd</sup>: Valedictory:** In the last session of the program, quiz took place from 1:00 p.m. to 1:30 P.m. Firstly Er. Harsimran Singh FDP Coordinator and HOD of electrical department insighted about the program. After that the guest of honor, Dr. Balwinder Singh Sidhu coordinator AICTE and MRSPTU MOU talked about the FDP program and upcoming programs for non teaching staff also. At last Dr. Hardeep Singh from BFCET thanked everyone who have participated in the FDP and he also added that the objective of this programme to bring different experts, their researches of AI and Iots is fulfilled. Furthermore, he thanked every expert who had delivered their best to succeed the FDP. He also requested participants to share their valuable experience and must share this knowledge to their students so that students will get maximum benefit. Meanwhile, He also congratulated and thanked to AICTE & MRSPTU, Er. Harsimran Singh FDP Coordinator, convenor, co-convenor, every member of organizing team of BFCET and all other participants who have made this event successful.

## BABA FARID COLLEGE OF ENGINEERING & TECHNOLOGY

Department of Electrical Engineering  
Organizes

### AICTE & MRSPTU SPONSORED SIX DAYS ONLINE FACULTY DEVELOPMENT PROGRAMME

on

### "IoT & ARTIFICIAL INTELLIGENCE IN INDUSTRY 4.0"



17<sup>th</sup> - 22<sup>th</sup> January, 2022



**Distinguished Guests & Speakers**



Chief Guest  
**Prof. (Dr.) Bala Singh Sidhu**  
HOD, Dept. of EEE, JEC  
Bathinda



Guest of Honour  
**Col. S. Venkat**  
Director, FDP Cell, AICTE



Guest of Honour  
**Mr. Saji Krishna Rao**  
HOD, Electrical Engg.  
Bathinda Engineering College

**Keynote Speakers**



Dr. Suhas Kakade  
College of Engineering, Pune



Dr. Priyank Ghata  
University of Warwick, UK



Dr. Nishant Kumar  
IIT, Jodhpur



Dr. Mala Katra  
IIT, Chandigarh



Dr. Kuldeep Singh Nagla  
NIT, Jalandhar



Dr. Amandeep Kaur  
G.U. Bathinda



Dr. Shimi Sudha Latha  
IIT, Chennai



Dr. Parwinder Singh  
IIT, Bathinda



Dr. Rajinder Kumar  
IIT, Kurukshetra



Dr. Abdul Saleem  
IIT, Roorkee



Dr. Amit Kaur  
GNDU, Amritsar



Ms. Answarya Manoharan  
Analysis & Design, Lead Professor &  
Researcher, IITM, JNU



Dr. Vedantham Lakshmi  
IIT, Dhanbad



Dr. Gaurav Kumar  
Director, IITRCS

<https://www.youtube.com/babafaridgroup>

**FOR QUERY**

Er. Harsimran Singh  
Coordinator  
**+91-9501115491**

Er. Hardeep Singh  
Co-coordinator  
**+91-9501115485**

Er. Abhi, Er. Satvir  
Co-coordinator  
**+91-9501115435/446**

## BABA FARID

GROUP OF INSTITUTIONS

Bathinda, Punjab, India

Page 12 of 38



# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

Inauguration on 17th Jan 20: x +

us06web.zoom.us/jc/88429080907/join?track\_id=&jmf\_code=&meeti...



REC View

You are viewing Sahil Bhardwa's screen View Options

**BABA FARID COLLEGE OF ENGINEERING AND TECHNOLOGY**  
AICTE & MRSPTU sponsored Six Days Faculty Development Programme  
on  
**ToT & Artificial Intelligence in Industry 4.0**

About the Programme by:

**Er. Harsimran Singh**  
Head of Department  
Electrical Engineering, BFCET



**BABA FARID GROUP OF INSTITUTIONS**  
Bathinda, Punjab, India

Unmute Start Video Participants 42 Share Screen Chat Reactions Settings More Leave

Windows Taskbar: 10:22 AM 1/17/2022

Inbox (4,176) - abhigarc x (26) WhatsApp x +

us06web.zoom.us/jc/88429080907/join?track\_id=&jmf\_code=&meeti...



REC View

You are viewing Sahil Bhardwa's screen View Options

**BABA FARID COLLEGE OF ENGINEERING AND TECHNOLOGY**  
AICTE & MRSPTU sponsored Six Days Faculty Development Programme  
on  
**ToT & Artificial Intelligence in Industry 4.0**

Address by  
**CHIEF GUEST:**

**Prof (Dr) Buta Singh Sidhu**  
Hon'ble Vice Chancellor  
MRSPTU, Bathinda



**BABA FARID GROUP OF INSTITUTIONS**  
Bathinda, Punjab, India

Windows Taskbar: 10:29 AM 1/17/2022



Inauguration on 17th Jan 20: x (25) WhatsApp

us06web.zoom.us/jc/88429080907/join?track\_id=&jmf\_code=&meeti...

REC View

You are viewing Sahil Bhardwa's screen View Options

## BABA FARID COLLEGE OF ENGINEERING AND TECHNOLOGY

AICTE & MRSPTU sponsored Six Days Faculty Development Programme  
on  
ToT & Artificial Intelligence in Industry 4.0

### GUEST OF HONOR

Sai Krishna Rao, Sr. General Manager, Education & Training Field Service Schneider Electric

**BABA FARID GROUP OF INSTITUTIONS**  
Bhimra, Puri, India

Sai Krishna Rao - Schneider Electric

Unmute Start Video Participants 40 Share Screen Chat Reactions Settings More Leave

10:36 AM 1/17/2022

Inauguration on 17th Jan 20: x (26) WhatsApp

us06web.zoom.us/jc/88429080907/join?track\_id=&jmf\_code=&meeti...

REC View

You are viewing Sai Krishna Rao - Schneider Electric's screen View Options

At Schneider Electric, we combine Energy Management, Automation and Software serving 4 markets, i.e. 70% of the world energy consumption

IT Convergence OT

Software and Analytics

Energy Automation

% are calculated on final energy

Buildings	+	Residential	> 30%
Industry & Infrastructure	> 30%	Data Centres & Networks	~3%

Life is On Schneider Electric

Sai Krishna Rao - Schneider Electric

Unmute Start Video Participants 35 Share Screen Chat Reactions Settings More Leave

10:47 AM 1/17/2022



# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

### Patrons:

**Dr Gurmeet Singh Dhaliwal**  
(Chairman, BFGI)

### Chairperson:

**Dr Jyoti Bansal**  
Principal

### Co-chairperson:

**Dr Tejinderpal Singh Sarao**  
Dean (R&D)

### Convenor:

**Er Tanu Taneja**  
(Head, Civil Engineering)

### Coordinator:

**Er Pankaj Mittal**  
(Assistant Professor, Civil Engineering)

### Co-coordinators:

**Er Rajan Vinayak**  
(Assistant Professor, Civil Engineering)  
**Er Priya Mittal**  
(Assistant Professor, Civil Engineering)

### Organizing Committee:

**Er Kovid Sharma**  
**Er Sandeep Maan**  
**Er Heena**  
**Er Divisha Garg**



### Contact Us

Er Rajan Vinayak (+91-9463643632)  
Er Pankaj Mittal (+91-9915746656)

Email: [webinarbfcet@gmail.com](mailto:webinarbfcet@gmail.com)  
Website: [www.bfcet.com](http://www.bfcet.com)



**BABA FARID COLLEGE**  
**OF ENGINEERING & TECHNOLOGY**  
Bathinda (Punjab) - 151001. [www.bfcet.com](http://www.bfcet.com)

**AICTE & MRSPTU SPONSORED**  
**SIX DAYS ONLINE**  
**FACULTY DEVELOPMENT PROGRAMME**

ON

**“Waste Management & Environmental  
Protection for Sustainable Development”**

**10<sup>th</sup> – 15<sup>th</sup> January 2022**



being organized by  
**Department of Civil Engineering**  
**BABA FARID COLLEGE**  
**OF ENGINEERING & TECHNOLOGY**

**BABA FARID**  
**GROUP OF INSTITUTIONS**  
Bathinda, Punjab (India)



### About us

Baba Farid Group of Institution (BFGI) is one of the premier Institution present in Northern Region of India, fully AC and Wi-Fi Campus, where scholarly activities and innovations are strongly appreciated & encouraged. It is managed by Baba Farid Vidyak Society Founded in 1993 under the kind patronage of prominent educationist of Malwa Region and under the Dynamic leadership of its Chairman Dr. Gurmeet Singh Dhaliwal. The Institute offers more than 50 Regular Courses & has a strength of more than 10,000 students not only from State of Punjab, But also from Different parts of country.

**Baba Farid College of Engineering and Technology** is a constituent institute of BFGI and is approved by AICTE & affiliated to MRSPTU, Bathinda. The College runs undergraduate course of BTech in the Disciplines of CSE, Civil, Mechanical & Electrical Engineering & Postgraduate Course in CSE.

### About Department

The Department of Civil Engineering, BFCET was established in 2008 under the aegis of Baba Group of Institutions. Department has aim to emerge as the centre of excellence in the field of civil engineering by providing excellent educational opportunities and allied research for the overall development of students to serve the society for the betterment of mankind. To evolve as a leading department by offering the best comprehensive teaching and learning practice for students to be self-competent technocrats with professional ethics and social responsibilities.

### About Programme

This programme is crafted to spread awareness about the new techniques for effective utilization of waste & its management and sustainable development. The programme covers key elements of the waste management system, such as its technical, environmental, social, financial and institutional aspects. In this programme, experts sights on sustainable development that have determined the society to recognize and become aware of the importance of environmental factors as well as of the functions and services that the environment offers.

### Content of the Programme

#### The Programme covers-

- Waste Land Management
- Waste Water Management
- Industrial Waste Management
- Swachh Bharat Mission
- Waste Minimization Practices & Wealth from Waste
- Waste Management in Transport Infrastructure
- Nuclear Energy in India
- Environmental Sustainability and Sustainable Development
- Healing of Earth and Ecosystem during COVID-19 lockdown
- Ozone Protection and Its Importance
- Application of Waste Material towards Environmental Remediation
- 3H's- Holistic, Health & Happiness
- National Education Policy (NEP-2020)

### Objectives and Outcomes

The programme will be extremely beneficial for the faculty, researchers and professionals from diverse disciplines. It helps them to identify potential environmental impacts from the generation of waste and get to know about new pedagogic approaches and practices of waste management for sustainable development.

- To get updated on the progress and pace of change in management of wastes from various sources, environmental protection, technological progress and societal expectations.
- To provide a holistic approach towards sustainable developments in the field, addressing the problems of ecosystems and the ecological complexes.
- To provide an overview of global environmental trends and status, assessment of quality and remedial approach.

### Resource Persons

Eminent personalities with rich experience and standing in their respective domain from reputed Institutions & Industries are resource persons in this programme.

### Who can attend

Faculty members of AICTE approved Engineering/Polytechnic Colleges/University departments & Research Scholars. Maximum 100 participants are allowed to attend the programme.

### Registration guidelines

Interested persons can attend the Programme by completing the registration through the following link or scan QR code.

### QR Code



**Registration Link: -**  
<https://forms.gle/bSACH2Lt7VxSveRz5>

### Important Dates

Last Date for Registration : **07<sup>th</sup> January 2022**  
Confirmation of Participation : **08<sup>th</sup> January 2022**

### Registration Fee & Certificate

There is **no registration fee**. Certificates shall be awarded to the participants with 80% attendance and with a score of minimum 60% marks in online test being conducted on the last day of the programme, and on submission of online feedback.

### Duration

The Programme will be conducted in **online mode** from 10<sup>th</sup>- 15<sup>th</sup> January, 2022 having a total of 16 sessions each of 90 minutes duration.



## Faculty Development Programme

On

## Waste Management & Environmental Protection for Sustainable Development

Sponsored by AICTE & MRSPTU

10<sup>th</sup> – 15<sup>th</sup> Jan 2022

Six days online faculty development program sponsored by AICTE & MRSPTU on “Waste Management & Environmental Protection for Sustainable Development” organized by Department of Civil Engineering, Baba Farid College of Engineering & Technology, Bathinda from 10th-15th January. More than 300 registrations were received across 24 States of India. The program was designed to spread awareness about the new techniques for effective utilization of waste & its management and sustainable development. It mainly covers the key elements of the waste management system & remedies for environment protection and sustainable development. Main topics discussed in the program was related to Waste Management, Waste Minimization Practices & Wealth from Waste, Sustainable Development Goals, Applications of Waste Materials and Clean Technologies for Sustainable Development, Healing of Earth during COVID-19 Lockdown, NEP-2020 and many more.

### Day 1: Monday, January 10th, 2022

#### Resource Person –

1. Prof Dr. Buta Singh Sidhu, Vice Chancellor, MRSPTU, Bathinda.
2. Col. B. Venket, Director, Faculty Development Cell, AICTE, New Delhi.
3. Prof (Dr) Adarsh Pal Vig, Hon’able Chairman, Punjab Pollution Control Board
4. Prof (Dr) Suresh Chand Jain, PU Chandigarh

**Session 1<sup>st</sup>:** - The program was inaugurated by the Chief Guest Prof Dr. Buta Singh Sidhu, Honorable Vice Chancellor, Maharaja Ranjit Singh Punjab Technical University, Bathinda. He addressed the audience with great enthusiasm and described how a person is responsible for environmental protection by managing waste. The Guest of Honour Col. B. Venket, Director, Faculty Development Cell, AICTE, New Delhi graced the occasion and congratulated BFCET for organizing FDP on such topics which are interdisciplinary in nature and will lead to environmental protection and environmental sustainability. Er. Tanu Taneja (Convenor FDP) briefed the importance of faculty development program to all participants. Dr. Tejinder Pal Singh Sarao (Dean R&D, BFCET) delivered welcome speech to all the faculty members as well as delegates.



**Session 2<sup>nd</sup>** - Prof (Dr) Adarsh Pal Vig, Hon'ble Chairman, Punjab Pollution Control Board, Government of Punjab graced the occasion with his presence as our guest of honor as well as session expert for the event. He talked about waste management and impact of Swacch Bharat Abhiyan on sustainability. He also detailed about importance of 3R's Reduce, Reuse and Recycle in today's era.

**Session 3<sup>rd</sup>** - Prof Dr Suresh Chand Jain, Former Dean and Chairman, Department of Chemical Engg. & Tech., Panjab University elaborated about Waste Minimization Practices & Wealth from Waste.

## **Day 2: Tuesday, January 11th, 2022**

### **Resource Person –**

1. Prof Dr. Manjeet Bansal, Dean Consultancy and Professor in Department of Civil Engg, MRSPTU Bathinda
2. Er. Naresh Kumar Garg, Principal Owner – Newlife Engineers.
3. Dr. Mansha Swami, Assistant Professor, Civil Engineering Department, DIT, Dehradun

**Session 1<sup>st</sup>**: - Prof Dr. Manjeet Bansal, Dean Consultancy and Professor in Department of Civil Engg, MRSPTU Bathinda concluded about Waste Land Management. He cleared all the queries raised by participants on abovementioned topic.

**Session 2<sup>nd</sup>** - Er. Naresh Kumar Garg, Principal Owner – Newlife Engineers elaborated about Alternate Sources of Energy, non-conventional sources of energy, renewable sources of energy.

**Session 3<sup>rd</sup>** - Dr. Mansha Swami, Assistant Professor, Civil Engineering Department, DIT, Dehradun is a Transportation Engineering Professional detailed about Plastic roads & recycled asphalt pavement: Waste to Wealth. She cleared all the queries raised by participants on abovementioned topic.

## **Day 3: Wednesday, January 12th, 2022**

### **Resource Person –**

1. Prof Dr. Sanjeev Aggarwal, Dean Academics of GZSCCET, and Director of Construction Wing of MRSPTU, Bathinda.
2. Prof Dr. Jagdish, Professor, Presidency University, Bengaluru.
3. Dr. Suman Singh, Principal Scientist, CSIR-CSIO, Chandigarh.

**Session 1<sup>st</sup>**: - Prof Dr. Sanjeev Aggarwal, presently he is Professor of Civil Engineering, and also serving as Dean Academics of GZSCCET, and Director of Construction Wing of MRSPTU, Bathinda concluded about Waste Management in Transportation Infrastructure Development. Session was interactive and professionals found this session very insightful.



**Session 2<sup>nd</sup>** - Prof Dr. Jagdish, currently working as a professor in Presidency University, Bengaluru elaborated about waste water management, its collection, transportation, treatment and disposal and how it is hazardous to society if not handled properly.

**Session 3<sup>rd</sup>**- Dr. Suman Singh, Principal Scientist, Materials Science and Sensor Applications (MSSA), CSIR-CSIO, Chandigarh concluded her talk on Chemical and Bio-Chemical Waste Management, various rules associated with it.

## **Day 4: Thursday, January 13th, 2022**

### **Resource Person –**

1. Dr. Prashant Kumar, Sr. Scientist, CSIR-CSIO, Chandigarh.
2. Dr. Sanjay Sharma, Professor, NITTTR, Chandigarh,
3. Dr. Anoop Verma, Associate Professor, Thapar Institute of Engineering & Technology, Patiala.

**Session 1<sup>st</sup>**: - Dr. Prashant Kumar, Sr. Scientist, Intelligent Machines and Communication Systems (IMCS), CSIR-CSIO detailed about Groundwater vulnerability and risk mapping using GIS and Sustainable Development Goal 6.

**Session 2<sup>nd</sup>** - Dr. Sanjay Sharma, Professor in department of civil engineering, NITTTR, Chandigarh elaborated about Clean Technologies for Sustainable Development and importance of sustainable environment.

**Session 3<sup>rd</sup>** - Dr. Anoop Verma, working as an Associate Professor at School of Energy and Environment, Thapar Institute of Engineering & Technology, Patiala, India concluded his talk on Applications of Waste Materials towards Environmental Remediation: An Approach towards Sustainable Development.

## **Day 5: Friday, January 14th, 2022**

### **Resource Person –**

1. Prof (Dr.) Vinod Kumar Garg, Professor, Central University of Punjab.
2. Dr. M.S. Dhanya, Assistant Professor, Central University of Punjab.

**Session 1<sup>st</sup>**: - Prof (Dr.) Vinod Kumar Garg, presently working as Professor at the Department of Environmental Science and Technology, Central University of Punjab detailed about Nuclear Energy in India. Session was interactive and professionals found this session very insightful.



**Session 2<sup>nd</sup>** - Dr. M.S. Dhanya, currently working as Assistant Professor at Department of Environmental Sciences and Technology, School of Environment and Earth Sciences in Central University of Punjab elaborated about Ozone Protection and its Importance. Influence of COVID-19 on healing of ozone layer.

**Session 3<sup>rd</sup>** - Prof (Dr.) Vinod Kumar Garg, presently working as Professor at the Department of Environmental Science and Technology, Central University of Punjab detailed about Healing of Earth and Ecosystem during the COVID-19 Lockdown.

### **Day 6: Saturday, January 15th, 2022**

#### **Resource Person –**

1. Dr Nitin Saluja, Associate Professor, Chitkara university
2. Dr. Sohan Chandel, Psychologist and Corporate Trainer

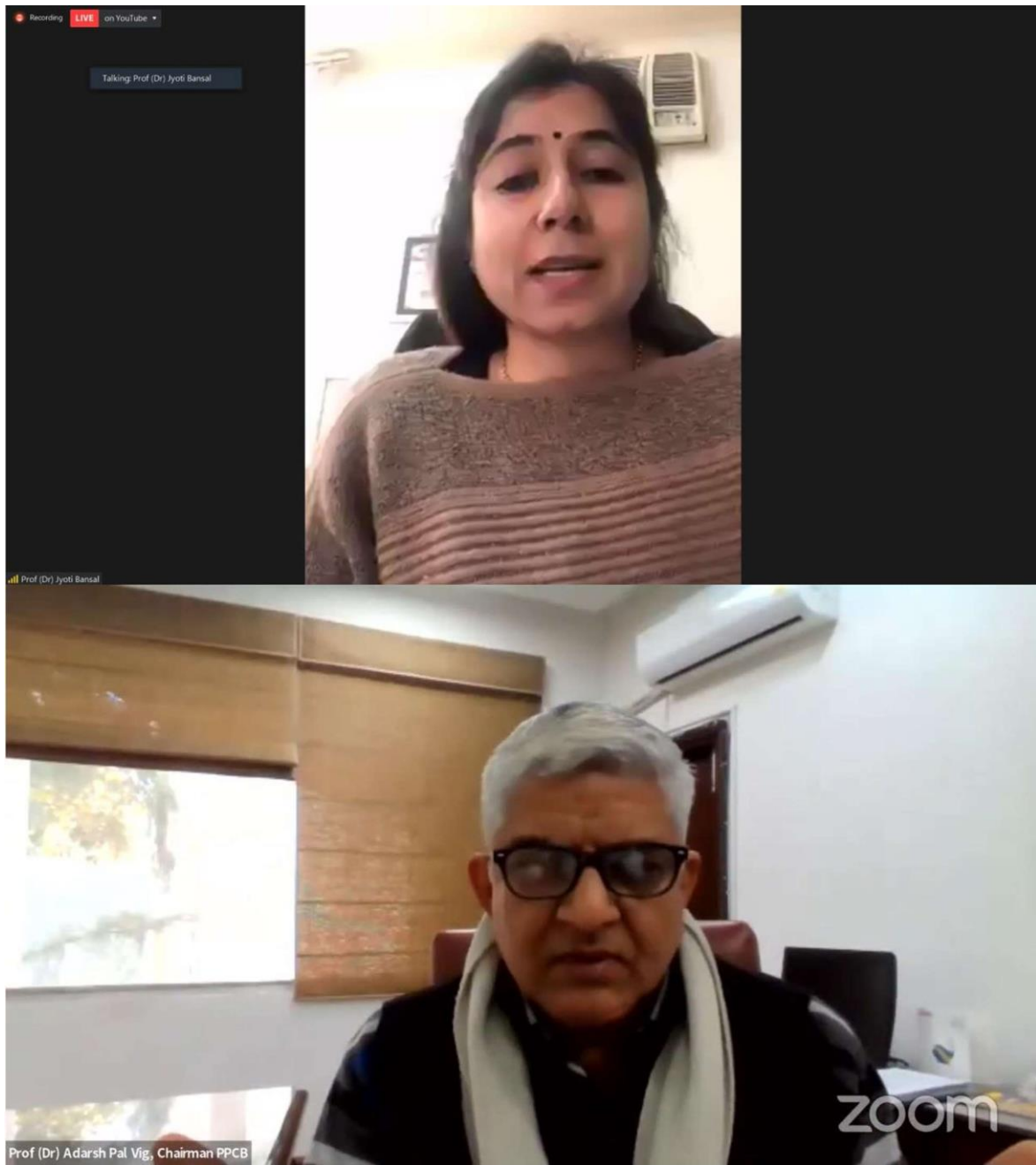
**Session 1<sup>st</sup>:** - Dr Nitin Saluja, Associate Professor from Chitkara university detailed about NEP-2020: An overview. The National Education Policy (NEP) 2020 has set the bar high for higher education institutes in the country. It envisages nurturing a vibrant campus life, incorporating a holistic and multi-disciplinary approach to imparting education with the objective of developing a workforce which is creative and multi-talented.

**Session 2<sup>nd</sup>** - Dr. Sohan Chandel, Psychologist and Corporate Trainer, Founder NMET Pvt. Ltd. elaborated about 3H's-Holistic, Health and Happiness. How to nurture stress free life and how one can improve the Communication, Interpersonal, Teambuilding and Leadership skills. He inspired people, suffering from anxiety, stress, depression and negativity in life.



# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY







# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

## List of Participants

Name of Participant	Designation	Institution/College Name
P DHANABAL	Assistant Professor	Annamacharya Institute of Technology and Science
Akansha	Research Scholar	Maharishi Markandeshwar (Deemed to be University)
Akhilesh Kumar	Assistant Professor	Chitkara University, Punjab
Akil K	Professor	Hindusthan College of Engineering and Technology
Akshay Chaudhary	Assistant Professor	Chitkara College
Alex Livingston Raja A	Assistant Professor	Hindusthan College of Engineering and Technology, Coimbatore
ANURAG	Research Scholar	JC BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA
Aravazhi K	Research Scholar	Anna University
Arshdeep Singh Kalsi	Assistant Professor	Baba Farid college of Engineering and Technology
ARUNVIEK G K	Associate Professor	Karpagam college of Engineering
AVINASH UTTAMRAO GHOGARE	Assistant Professor	Pravara Rural Engineering College, Loni
B RAMU	Assistant Professor	VEMU Institute of Technology
B. T. DOLAS	Lecturer	Government Polytechnic, Yavatmal
Balamurugan	Assistant Professor	Er.perumal manimekalai college of engineering
Balwant Singh	Assistant Professor	Baba Farid college of Engineering and Technology
BASILAHAMED S	Assistant Professor	JNN INSTITUTE OF ENGINEERING
Bhor Amol Sunil	Assistant Professor	Samarth College Of Engineering Belhe
Biplab Som	Research Scholar	J.G.E.C.(North Bengal University)
BUDURU SANDEEP KUMAR REDD	Associate Professor	Lords institute of engineering and technology
C CHINNA SURESH BABU	Associate Professor	SAI RAJESWARI INSTITUTE OF TECHNOLOGY, PRODDATUR
Chandni Patel	Assistant Professor	Sage University Indore
Chandrakant Verma	Research Scholar	Ashoka Institute Of Technology And Management
DARSHANKUMAR PARESHKUMAR	Sr. Lecturer	ATMIYA UNIVERSITY
Denis Jangeed	Assistant Professor	Geetanjali Institute of Technical Studies Udaipur Rajasthan India
Deshmukh Sachin Chandrakant	Assistant Professor	W I T solapur
Dharmendra Kumar Shukla	Assistant Professor	Jaypee University of Engineering and Technology, Guna
Dinesh Kumar M	Assistant Professor	Hindusthan College of Engineering and Technology
DINESH KUMAR R	Assistant Professor	Easwari Engineering College (Autonomous)
Divisha Garg	Assistant Professor	Baba Farid college of Engineering and Technology
Dr Nekkanti Kumaraswamy	Director/Principal	VVIT
Dr.P.Arulmathi	Assistant Professor	University college of engineering Dindigul
G. L. Sathyamoorthy	Professor	Kumaraguru College of Technology, Coimbatore
G. OMKAR	Assistant Professor	VEMU Institute of Technology
G.Ramachandran	Professor	Ramachandran
Ganesh Choudhary	Assistant Professor	SAGE University Indore
Gaurav Awasthi	Research Scholar	National Institute of Construction management and research (NICMAR) Pune
Gurkirtan Sharma	Assistant Professor	Baba Farid college of Engineering and Technology
Harpartap Singh	Assistant Professor	Baba Farid college of Engineering and Technology
Harsimran Singh	Assistant Professor	Baba Farid college of Engineering and Technology
Heena	Assistant Professor	Baba Farid college of Engineering and Technology
Jammala Surya Narayana	Assistant Professor	Narayana Engineering College, Gudur
Janvi Hirani	Assistant Professor	Parul University
K APPALA NAIDU	Assistant Professor	DIET
K RAJESHKUMAR	Assistant Professor	Government College of Technology
K.KARTHIKEYAN	Assistant Professor	Sri Ranganathar Institute of Engineering and Technology
K.SARASWATHI	Assistant Professor	Hindusthan college of Engineering and Technology
Kaneez Fatima	Assistant Professor	Deccan College of Engineering and Technology
KARETI SIVAKUMAR	Associate Professor	NARAYANA ENGINEERING COLLEGE
KARTHIK S	Assistant Professor	Christ the King Engineering College
Karuna bhise	Research Scholar	Scoe
Kola sunanda	Assistant Professor	Narayan Engineering College
Kothara santhi	Assistant Professor	Dadi institute of engineering and technology



## BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

Kundan Kumar Rao	Sr. Lecturer	Giani Zail Singh Campus College of Engineering & Technology MRSPTU, Bathinda
Lathiga C	Assistant Professor	Sri Ranganathar institute of Engineering and Technology
Lenin dhal	Assistant Professor	Srm Easwari Engineering College
M Nohitha	Assistant Professor	VEMU INSTITUTE OF TECHNOLOGY
M.AMALA	Assistant Professor	EASWARI ENGINEERING COLLEGE
MAHANTESH KANTHI	Associate Professor	ANGADI INSTITUTE OF TECHNOLOGY AND MANAGEMENT BELAGAVI
Manoj katiyar	Assistant Professor	GLA university mathura UP
MCB MUNI	Sr. Lecturer/Lecturer	GHM
Mithra G	Assistant Professor	Sri Ranganathar Institute of Engineering and Technology
Mohit Dhirajlal Satani	Professor	Atmiya University
Mukesh Kumar Gupta	Associate Professor	G. B. Pant DSEU Okhla III Campus
N RADHAKRISHNAN	Assistant Professor	PSR ENGINEERING COLLEGE
N VENKATA SAI RAM KUMAR	Assistant Professor	R.V.R & J.C College of Engineering
NANDYALA VARADAREDDY	Sr. Lecturer	K L University
Naveen Thakur	Assistant Professor	Sobhasaria group of institution
Navya N	Assistant Professor	Presidency University
Neeraj Singh Bais	Assistant Professor	Ballarpur Institute of Technology, Ballarpur
Nimisha Singh	Assistant Professor	Baba Farid college of Engineering and Technology
NUNNA KARANTHI REKHA	Assistant Professor	SRK INSTITUTE OF TECHNOLOGY
P. SUBASHREE	Associate Professor	Hindusthan College of Engineering and Technology
P.HEMA	Research Scholar	KSR COLLEGE OF ENGINEERING
P.KANAKA	Assistant Professor	Kongunadu College of Engineering and Technology
P.Kishore Kumar Reddy	Associate Professor	KSRM College of Engineering Kadapa
Parthiban A	Associate Professor	Sanskriti school of engineering
Patange Onkar Vishnu	Sr. Lecturer	D Y PATIL POLYTECHNIC
Perumalla Harsha Vardhan	Assistant Professor	Narayana Engineering College, NECG
Pokuri Chaitanya	Assistant Professor	TKR College of Engineering and Technology
POTHARABOINA VINAY	Assistant Professor	VAAGDEVI COLLEGE OF ENGINEERING
Pradeep T	Associate Professor	Kongu Engineering College
PRATHAP M G	Research Scholar	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY KATTANKULATHUR CAMPUS
Priya Mittal	Assistant Professor	Baba Farid college of Engineering and Technology
Priyadharshini R	Assistant Professor	Hindusthan College of Engineering and Technology
Priyanka Pradhan	Research Scholar	Veer Surendra Sai University Of Technology
Priyanka Rajput	Assistant Professor	SAGE University , Indore
Pruthviraj SR	Assistant Professor	University BDT College of Engineering
R.Kavidha	Professor	M.P.NACHIMUTHU M JAGANATHAN ENGINEERING COLLEGE, CHENNIMALAI
R.Sakthivel	Sr. Lecturer	Sri Krishna Polytechnic College
Rajan Vinayak	Assistant Professor	Baba Farid college of Engineering and Technology
RAJESH V KULKARNI	Sr. Lecturer	GOVERNMENT POLYTECHNIC PANAJI-GOA
RAMESHWARI S	Assistant Professor	Er Perumal Manimekalai college of engineering
RANJIT ARJUN KATKAR	Assistant Professor	AGT's Dr. DAULATRAO AHER COLLEGE OF ENGINEERING, KARAD.
RATHNAVEL PON	Assistant Professor	AKSHAYA COLLEGE OF ENGINEERING AND TECHNOLOGY
Ravi Kant	Assistant Professor	Shoolini University
Ravindra Maruti Desai	Assistant Professor	Sanjay Ghodawat University, Atigre, Kolhapur
Rinki Mishra	Assistant Professor	SAL institute of technology and Engineering research
Rishabh Yadav	Assistant Professor	SAGE University, Indore
Robert Ravi	Professor	ACE Engineering College Hyderabad-Telangana
S.Gayathri	Assistant Professor	Paavai Engineering College
S.KARTHIK	Research Scholar	Muthayammal Engineering college
SABARINATHAN N	Research Scholar	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
SAHANA S	Research Scholar	Malnad college of Engineering
SAKSHESHWARI	Assistant Professor	Faculty of Engineering and Technology
Sandeep Maan	Assistant Professor	Baba Farid college of Engineering and Technology
Sanghita Sen	Research Scholar	SRM IST KTR
Santhosh K	Assistant Professor	Alva's Institute of Engineering and Technology



## BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

SANTHOSH RAM R	Assistant Professor	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, RAMAPURAM
SARANYA K	Assistant Professor	Sri Ramakrishna Engineering College
SARUMATHI K	Assistant Professor	Vemu Institute of Technology
Satvir Singh	Assistant Professor	Baba Farid college of Engineering and Technology
SAURABH JAGLAN	Assistant Professor	DCRUST, MURTHAL, SONIPAT
SHAILESH PAL	Assistant Professor	DJMIT
Shanmugavadivu V	Assistant Professor	Mahendra Engineering College
Shashi Kumar V N	Assistant Professor	YOGANANDA INSTITUTE OF TECHNOLOGY AND SCIENCE
Shashikant Buvasaheb Gosavi	Assistant Professor	Walchand Institute of Technology Solapur
Shiva Shankar K M	Assistant Professor	ACS College of Engineering
SNEHA.T	Research Scholar	GOVERNMENT COLLEGE OF TECHNOLOGY-COIMBATORE
Sowmiya B	Assistant Professor	Nadar Saraswathi College of Engineering and Technology,Theni
Subhadip Sarkar	Sr. Lecturer/Lecturer	ABS ACADEMY OF POLYTECHNIC
Sudha	Assistant Professor	VIVEKANANDHA COLLEGE OF TECHNOLOGY FOR WOMEN
SUDIKSHA CHETTRI	Research Scholar	SMIT
SUGANTHI M	Assistant Professor	Mahendra Engineering College
Sukhdeep Singh	Assistant Professor	Giani Zail Singh Campus College of Engineering & Technology MRSPTU, Bathinda
Sunita Kotwal	Assistant Professor	Giani Zail Singh Campus College of Engineering & Technology MRSPTU, Bathinda
Supriya Tripathi	Research Scholar	Jaypee University Engineerin & Technology Guna
SURESH V	Assistant Professor	Hindusthan College of Engineering and Technology
Swetal Hitendrabhai Gandhi	Assistant Professor	Parul University
Tahir Hussain	Sr. Lecturer/Lecturer	Baba Farid college of Engineering and Technology
Tanu	Assistant Professor	Baba Farid college of Engineering and Technology
THOTA MURALI KRISHNA	Associate Professor	Vemu Institute of Technology
U.NANDHINI	Assistant Professor	Sri Ranganathar Institute of Engineering and Technology
VAMSI KRISHNA	Research Scholar	Panimalar Engineering College
Vedant Mankar	Assistant Professor	Ycce, Nagpur
VELUMANI	Assistant Professor	K.S.RANGASAMY COLLEGE OF TECHNOLOGY
VENKADA LAKSHMI R	Assistant Professor	National Engineering college, Kovilpatti
VENKATESH PATIBANDLA	Assistant Professor	KKR AND KSR INSTITUTE OF TECHNOLOGY AND SCIENCES
VIGNESH KUMAR. B	Assistant Professor	Dr. N. G. P INSTITUTE OF TECHNOLOGY
Vignesh Manivannan	Assistant Professor	Chettinad College of Engineering and Technology
Vikas Prabhakar	Assistant Professor	Gautam Buddha University
Vinay Kumar Singh	Assistant Professor	Madan Mohan Malaviya university of technology gorakhpur uttar pradesh



## **Administrative Training Program On Classroom Learning Management System Using Collpoll**

**2<sup>nd</sup> Aug 2021**

**Invited Expert:** Mr. Lakhwinder

**Participants:** 47

Baba Farid College of Engineering and Technology had organized a one-day Administrative Training Programme on ‘Classroom Learning Management System Using Collpoll’ to educate and to promote the benefits of Coll Poll among the staff community. This training programme had been designed so that the complete staff members could get aware that Coll Poll was a web and mobile based application. This was not only useful for the teaching staff as it had several other modules which had a no. of applications in other non-teaching fields like Hostel management, Examination management system, Community management, Human resource management and many more.

Moreover, the speaker talked about the feedback management system of CollPoll that CollPoll’s online feedback management system could help institutions to collect feedback from the students, rate and analyse faculty’s performance, and reduce the strenuous work of physically examining the feedback pages of each and every student. This could also significantly reduce the burden of keeping and maintaining the records on a manual basis while ensuring feedback privacy.

In addition to it, the speaker elaborated about the examination management module that CollPoll could provide Pre- Examination management, examination schedule and it could be helpful in the given points like:

- It could Conduct Exams Based on Outcome Based Education: Map Each Question to Course Outcome and BT Level (Bloom’s Taxonomy)
- It could Manage Questions and Exam Paper Repository at Course and Programme-Level
- It could do Continuous Classroom Assessments using Faculty Grade Book
- It could Generate Several Question Paper Sets by Random Question Allocations.

So, in this way using CollPoll during the examinations would reduce the pressure and heftiness of exams on the entire teaching staff community.

After briefing the uses of CollPoll for the teaching staff, the speaker emphasized on the uses of it for the non-teaching staff as well as CollPoll could be highly effective in a lot of other applications as mentioned



previously. In addition to it, the speaker mentioned about the campus entry and exit management using CollPoll was quite easy and safer as it could provide gate pass management in a way like

- It could Track Multiple Check Ins / Check Outs
- It could Track the Number of Students on the Campus and outside the Campus at a Particular Time
- It could Add Integrations Such as Biometrics and RFID Card to Track Exit/Entry
- It could Customize Students Entry and Exit Timings Based on Programme Year and Hostel Building
- It could Generate Automated Notifications to Parents, Warden and Students for Entry, Exit, Late Entry and Absenteeism and gate pass approvals, Covid self-declaration and visitor management in an equivalent way.

Also, the speaker guided the staff members and other amenities offered to students by Collpoll i.e., Collpoll Help Center (CHC). The following steps included:

- Login to collpoll app.
- Click on CHC Tab at bottom and then click on + sign to put new request
- Select your request type if you want to put grievance clicks on grievance and select your department
- Select your grievance type such as academics, sports, exams, Transport, Hostel, CAD etc.
- Fill in your details and attach the application and click on create.
- if you are putting a request for attendance weightage, click on the weightage tab.
- Select the type of activity for which you want weightage like medical, sports, cultural and NCC/NSS etc.
- Select the document type you, fill details, and attach application.

### **Conclusion:**

At the end of session, the staff members were motivated enough to use Coll Poll in various disciplines including academics as well as others. Briefly, everyone took the responsibility to guide the students at the college with the same knowledge.



## List of Staff Members

S.No.	Name	Designation
1	Damanpreet Kaur	Assistant Professor
2	Tanu	Assistant Professor
3	Sandeep Mann	Assistant Professor
4	Rajan Vinayak	Assistant Professor
5	Gurkirtan Sharma	Assistant Professor
6	Pankaj Mittal	Assistant Professor
7	Priya Mittal	Assistant Professor
8	Heena	Assistant Professor
9	Dr. Jayoti Arora Bansal	Professor
10	Amandeep Singh	Assistant Professor
11	Ashu Bansal	Assistant Professor
12	Charandeep Singh Bedi	Assistant Professor
13	Harleen Kaur	Assistant Professor
14	Sunil Kumar Nagpal	Assistant Professor
15	Amandeep Kaur	Assistant Professor
16	Dr. Nimisha Singh	Assistant Professor
17	Arashdeep Kaur	Assistant Professor
18	Pooja Nagpal	Assistant Professor
19	Gurpreet Kaur	Assistant Professor
20	Babaljeet Kaur	Assistant Professor
21	Manpreet Kaur	Assistant Professor
22	Simranjeet Kaur	Assistant Professor
23	Dr. Manish Gupta	Professor
24	Rajpreet Kaur	Assistant Professor
25	Abhi Garg	Assistant Professor
26	Harsimran Singh	Assistant Professor
27	Pushpinder Sharma	Assistant Professor
28	Balwant Singh	Assistant Professor
29	Satvir Singh	Assistant Professor
30	Manpreet Kaur	Assistant Professor
31	Hardeep Singh	Assistant Professor



## BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

32	Nitika	Assistant Professor
33	Suman Rani	Assistant Professor
34	Manpreet Kaur	Assistant Professor
35	Harjot Kaur	Assistant Professor
36	Harshdeep Sharma	Assistant Professor
37	Rishamjot Kaur	Assistant Professor
38	Dr. Manish Goyal	Professor
39	Dr. Tejinderpal Singh Sarao	Professor
40	Gurjant Singh	Assistant Professor
41	Gaurav Garg	Assistant Professor
42	Arshdeep Singh Kalsi	Assistant Professor
43	Kovid Sharma	Assistant Professor
44	Gaurav Kumar	Assistant Professor
45	Dr. Kanwaljeet Kaur	Associate Professor
46	Manpreet Singh	Assistant Professor
47	Sunil Kumar Paswan	Assistant Professor



## Staff Development Programme

On

**Microsoft Office**

**4<sup>th</sup> – 8<sup>th</sup> Aug 2022**

Five days Staff Development Programme (SDP) on Microsoft Office-Tips and Tricks was conducted at Baba Farid College of Engineering and Technology, Bathinda from 04th to 08th August, 2022.

### **Day 1: Thursday, August 04, 2022**

#### **Resource Person:**

1. Dr. Pardeep Jindal

The first day of the staff development program began with an introductory speech by the resource person, highlighting, in brief, the importance and benefits of the SDP. The resource person told about various concepts which are to be covered during the workshop and how these concepts are useful in the routine office work. After the introduction, resource person started with the first concept i.e., Microsoft Office Basics, Introduction to Microsoft Word 2010, and use of Common Features of the Microsoft Office 2010. Then he elaborated how the user can do editing of Documents and Using Tables, Creating Reports, and Newsletters. Listeners also learned more about Mail Merge. In the evening session, everyone was told to do hands-on practice on the discussed topics. They were told to prepare sample documents so that they can be benefited by doing practice.

### **Day 2: Friday, August 05, 2022**

#### **Resource Person:**

1. Dr. Pardeep Jindal

Day 2 started with introduction to Microsoft PowerPoint 2010 and its importance in office related works. The resource person explained how someone can get started with PowerPoint. Then the resource person told about other features of Power Point like how the user can work with List and Graphs. The interesting part of the workshop was that everyone not only listened to the concepts but they also had hands-on practice on the concepts explained. Then the resource person told how someone can enhance a Presentation with the help of in-built animations. The timer options were also told. In the concluding session of the day, everyone was doing their practice on MS Power Point by preparing presentations on various topics of computer science and technology. He started with introduction to Outlook and use of Outlook in routine communication. He explained how to interact with Outlook 2010. He explained GUI



interface of MS-Outlook. He explained various concepts of MS-Outlook like receiving E-Mail, Composing E-Mail Messages and answering E- Mails. With the completion of last module of MS-Office, the resource person initiated the valedictory session, by concluding SDP and briefing about various modules covered during last three days.

### **Day 3: Monday, August 08, 2022**

#### **Resource Person:**

1. Dr. Pardeep Jindal

Next day started with query session for the concepts discussed on day 1 and day 2. After the question- answer session, the resource person started the next module of MS-Office i.e. MS-Excel. He started with introduction to Microsoft Excel 2010. He started with how someone can start working with MS-Excel. He told that MS-Excel is used for accounting purpose as well as for document publishing. MS-Excel has power to hold data in tabular form i.e. in the form of rows and columns. Keeping data in this format makes it easy to manage. Further he told about how various formulae can be applied on different rows and columns. The resource person also told about various Functions and Charts that can be prepared based on the data available. Charts adds more value to data as it makes it easier to analyse chart than the actual data. He also told about some other features like Advanced Functions, Pivot Charts, and PivotTables. In the evening session, the resource person explained Advanced Printing, Formatting, and Editing Options. He also explained some of the concepts of Database Management System which includes primary key, foreign key and other keys important for maintaining the integrity of Databases. He also explained about working with Forms and Reports. At the end, he explained some features of MS- Access which helps user to maintain security of the data.



# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY





# BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

## List of Staff Members

S. No.	Name	Designation
1	AAKASH GODARA	ASSISTANT PROFESSOR
2	ABHI GARG	ASSISTANT PROFESSOR
3	AMANPREET KAUR	ASSISTANT PROFESSOR
4	AMRITPAL KAUR	ASSISTANT PROFESSOR
5	BABALJEET KAUR	ASSISTANT PROFESSOR
6	BALDEEP SINGH	ASSISTANT PROFESSOR
7	BHARTI	ASSISTANT PROFESSOR
8	BHAWNA SHARMA	ASSISTANT PROFESSOR
9	CHARANDEEP SINGH BEDI	ASSISTANT PROFESSOR
10	DILSHAD ALI	ASSISTANT PROFESSOR
11	DINESH KUMAR	ASSISTANT PROFESSOR
12	GURPREET KAUR	ASSISTANT PROFESSOR
13	GURPREET KAUR SIDHU	ASSISTANT PROFESSOR
14	GURPREET SINGH	ASSISTANT PROFESSOR
15	GURSEWAK SINGH	ASSISTANT PROFESSOR
16	HAPPY SINGH	ASSISTANT PROFESSOR
17	HARDEEP SINGH	ASSISTANT PROFESSOR
18	HARSIMRAN SINGH	ASSISTANT PROFESSOR
19	INDRAJ KUMAR	ASSISTANT PROFESSOR
20	JASHANDEEP KAUR	ASSISTANT PROFESSOR
21	JASHANPREET KAUR	ASSISTANT PROFESSOR
22	JASPREET SINGH	ASSISTANT PROFESSOR
23	KABAL SINGH	ASSISTANT PROFESSOR
24	KANWALJEET KAUR	ASSISTANT PROFESSOR
25	LAKHWINDER SINGH	ASSISTANT PROFESSOR
26	KOVID SHARMA	ASSISTANT PROFESSOR
27	MAGGI THAKUR	ASSISTANT PROFESSOR
28	MANISH KUMAR SINGLA	ASSISTANT PROFESSOR
29	MANISHA RANI	ASSISTANT PROFESSOR
30	MANPREET KAUR	ASSISTANT PROFESSOR
31	MANPREET SINGH	ASSISTANT PROFESSOR
32	NARINDER KUMAR	ASSISTANT PROFESSOR
33	NAVDEEP KOCHHAR	ASSISTANT PROFESSOR
34	NAVEEN DAHANWAL	ASSISTANT PROFESSOR
35	NIMISHA SINGH	ASSISTANT PROFESSOR
36	NIRBHAY SINGH	ASSISTANT PROFESSOR
37	PAWANDEEP KAUR	ASSISTANT PROFESSOR
38	POOJA DHALIWAL	ASSISTANT PROFESSOR
39	RAJAN VINAYAK	ASSISTANT PROFESSOR
40	RAVNEET SINGH SIDHU	ASSISTANT PROFESSOR
41	SAHIL SIDANA	ASSISTANT PROFESSOR
42	SANDEEP MAAN	ASSISTANT PROFESSOR
43	SANDEEP SINGH	ASSISTANT PROFESSOR
44	SANDEEP SINGH	ASSISTANT PROFESSOR
45	SARBJEET KAUR	ASSISTANT PROFESSOR
46	SATVIR SINGH	ASSISTANT PROFESSOR
47	SHAMINDER KUMAR	ASSISTANT PROFESSOR
48	SIMRANJIT SINGH	ASSISTANT PROFESSOR
49	SIMRANPREET KAUR	ASSISTANT PROFESSOR
50	SONAL VIKRAM	ASSISTANT PROFESSOR
51	STALINJEET SINGH	ASSISTANT PROFESSOR
52	SUKHWINDER SINGH	ASSISTANT PROFESSOR
53	SUMAN RANI	ASSISTANT PROFESSOR
54	TANU TANEJA	ASSISTANT PROFESSOR
55	TARUNBIR SINGH	ASSISTANT PROFESSOR
56	VEENU JINDAL	SENIOR ASSISTANT
57	JASWANT SINGH	LAB INSTRUCTOR
58	GEETA RANI	LIBRARY ASTT.



## BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

59	INDRAJ KUMAR	LAB INSTRUCTOR
60	LAKWINDER SINGH	LAB INSTRUCTOR
61	RUPINDER KAUR	LIBRARIAN
62	SUKHWINDER KAUR	PA
63	SUKHRAJ SINGH	ASSTT. SUPDT
64	RAJPAL KAUR	OFFICE ASSTT
65	HARJEET SINGH	OFFICE ASSTT
66	RAKESH KUMAR	LAB INSTRUCTOR
67	SANDEEP SINGH	SUPDT
68	BALJEET RUPAL	LAB TECHNICIAN
69	SANDEEP SINGH	LAB INSTRUCTOR
70	HAPPY SINGH	LAB INSTRUCTOR



## Staff Development Programme

On

## Cultivating Skills and Knowledge for College Gardeners

9<sup>th</sup> – 13<sup>th</sup> May 2022

### Invited Experts:

1. Mr. Gurwinder Singh, AP in Agronomy Department of Agriculture
2. Mr. Amandeep Singh(Supervisor)

### No. of Participants: 10

Baba Farid College of Engineering and Technology Bathinda organized five days of Staff Development Programme (SDP) on “Cultivating Skills and Knowledge for College Gardeners”. Gardening training is an important aspect of agriculture that focuses on providing individuals with the knowledge and skills to grow, cultivate, and maintain plants in various settings.

This endeavor aimed to teach gardeners to use the tools and implements of the garden, prepare the soil and carefully cultivate plants and develop knowledge and skills to understand the importance of nutritious food and nutrition-sensitive agriculture. Apart from this, it gave knowledge about establishing and managing the Kitchen Gardens within the available space & resources as well as elaborates and disseminates the importance of nutrition and Kitchen Gardening.

The gardening program was held over the course of five days, with sessions taking place each day. 10 gardeners had been gathered for this development programme. The program was designed to be interactive and hands-on, with participants given the opportunity to practice the skills they were learning in a garden setting. The following topics were covered in each session:

### Day 1:

Introduction to gardening and soil preparation

Understanding plant nutrition and fertilizers

Choosing the right plants for your garden

Practical session: Planting a garden bed

### Day 2:

Watering and plant care

Sustainable gardening practices, including composting and pest control

Practical session: Creating a compost bin and learning about natural pest control methods

## Day 3:

Harvesting and plant maintenance

Creating a sustainable garden plan for the future.

Practical session: Harvesting produce from the garden and creating a garden plan

The gardening training program was successful in achieving its goals and objectives. Participants demonstrated an improved understanding of soil preparation, plant nutrition, watering and plant care, and sustainable gardening practices. They also gained practical skills in planting and maintaining a garden. Participants reported feeling more confident in their ability to grow and maintain plants and expressed enthusiasm about continuing to practice sustainable gardening practices in the future.





## Conclusion:

The gardening training program was an effective way to provide participants with the knowledge and skills necessary to grow and maintain plants, as well as to promote sustainable gardening practices. The program was designed to be interactive and hands-on, which allowed participants to practice the skills they were learning in a real-world setting. Overall, the program was a success and provided valuable knowledge and skills to participants.

## List of Staff Members

Sr. No.	Name	Designation
1	Jagan Nath	Gardener
2	Balwinder Singh	Gardener
3	Rajesh	Gardener
4	Gian Chand	Gardener
5	Amareet Lal	Gardener
6	Satnam Singh	Gardener
7	Babu Ram	Gardener
8	Krishan Lal Mangal	Gardener
9	Anil Kumar	Gardener
10	Harjinder Singh	Gardener



## Staff Development Programme

On

## Advance Techniques in Electrical Maintenance

23<sup>rd</sup> July 2021

### Invited Expert:

Mr. Gursewak Singh (Electrical Supervisor)

**No. of participants:** 5

### Brief Report:

A staff development program on “Advanced Techniques in Electrical Maintenance” for college electricians was organized by the EE Deptt. at BFCET, Bathinda on 23 July, 2021. The programme was aimed at improving the knowledge and skills of electricians in college through advanced training in electrical maintenance and troubleshooting. The resource person, Mr. Gursewak Singh, a renowned electrical supervisor, delivered a highly informative and interactive session on the topic.

Mr. Gursewak Singh started the session by introducing the advanced electrical theory and concepts, including electrical circuits, voltage, current, resistance, and power. He discussed the techniques for diagnosing and troubleshooting electrical problems, including the use of testing equipment and diagnostic software. He then went on to explain the safety practices and procedures for working with electrical systems, including personal protective equipment (PPE), lockout/tag out procedures, and arc flash protection. He explained the advanced electrical system maintenance and repair techniques, including motor control circuits, lighting systems, and wiring systems. Mr. Gursewak Singh also provided a detailed explanation of the energy efficiency and sustainability concepts and practices, including energy audits, renewable energy sources, and energy management systems. The resource person highlighted the importance of communication and collaboration skills for working effectively with other trades people, supervisors, and college staff. The session was interactive, and the participants were encouraged to ask questions and clarify their doubts on the subject matter.

### Conclusion:

The program on ‘Advanced Techniques in Electrical Maintenance’ for college electricians was highly informative and engaging, providing the participants with a comprehensive understanding of the subject. The session emphasized the importance of techniques for diagnosing and troubleshooting electrical problems and highlighted the need for advanced electrical system maintenance and repair techniques. The

programme was beneficial to all participants which included 5 electricians of the college campus. We thank Mr. Gursewak Singh for sharing his knowledge and expertise on the subject.



**Staff Development Programme dated 23 July, 2021**

### List of staff members

Sr. No.	Name	Designation
1	Jagmeet Singh	Electrical Attendant
2	Gursewak Singh	Electrical Supervisor
3	Gurmit Singh	Electrician
4	Jasveer Singh	Electrician
5	Buta Singh	Electrician