Innovations by the Faculty in Teaching and Learning

- The main role of the faculty is to provide quality teaching by using innovative methodology and techniques. The department follows Outcome Based Education System for teaching and assessment.

- Each faculty prepares and maintain course file for course they handle. The course file contains Syllabus, Lesson Plan, Course Objectives, Course Outcomes, CO-POs Mapping, Co-PSOs Mapping, Gap Identification Content Delivery method, Assessment Method, Assignments, Internal Assessment Questions with Answers, Question Bank and Attainment calculation.

- Faculty members prepare laboratory manual and laboratory file for the corresponding laboratory course they handle. Apart from regular laboratory experiments, two or more innovative experiments based on content beyond syllabus are included to improve practical knowledge of the students.

- **E-content**–Faculties design e-content for the course(s) they teach which contains course outcomes and various schemes to attain those course outcomes. In addition, it also contains helpful resources such as Flipped classes/ You tube videos/NPTEL/SWAYAM content are used as teaching aids.
- **Gamification-** Multiple and interesting ways are used to captivate students' attention and involvement in the topic(s) being instructed in a lecture. The pedagogy is designed in such a manner to give a look and feel of a game being played.

- The Course teachers and the HoD identify the efficacy of the curriculum delivery and take corrective measures such as remedial classes, group learning etc.

- The salient features of each content are highlighted and are repeatedly emphasized in the class room learning process.

- Class room discipline is well maintained, ethics and moral values are insisted to the students. Real time examples are demonstrated for the content being taught.

- Each student is monitored by faculties through mentor scheme and is being given as and when required.

- Effective feedback mechanism is followed to know the views of the students regarding the teaching methods of the faculties. Appropriate corrective actions are taken to improve the teaching learning process.

- Faculty members are encouraged to attend or organize Conferences, FDPs and STTPs to gain depth in knowledge about the course they handle.

5.5.1 Contents Delivery Methods:

- **Lecture, Lecture with discussion and demonstration, model presentation, flipped teaching methods and conducting Quiz.**
- **Active Learning Methods -** tutorials, assignments, team work, projects, Quiz, lab experiments.
- **Analysis Level Methods**-·debate, mini projects, brain storming, home Assignments.
- **Evaluate Level Methods**- Assignments, Quizzes , seminars, case studies, lab experiments
- **Multimedia Learning Process -** The faculties are using multimedia elements and LCD projectors in the Class room. It will help them to represent the content in a more meaningful way using different media elements.

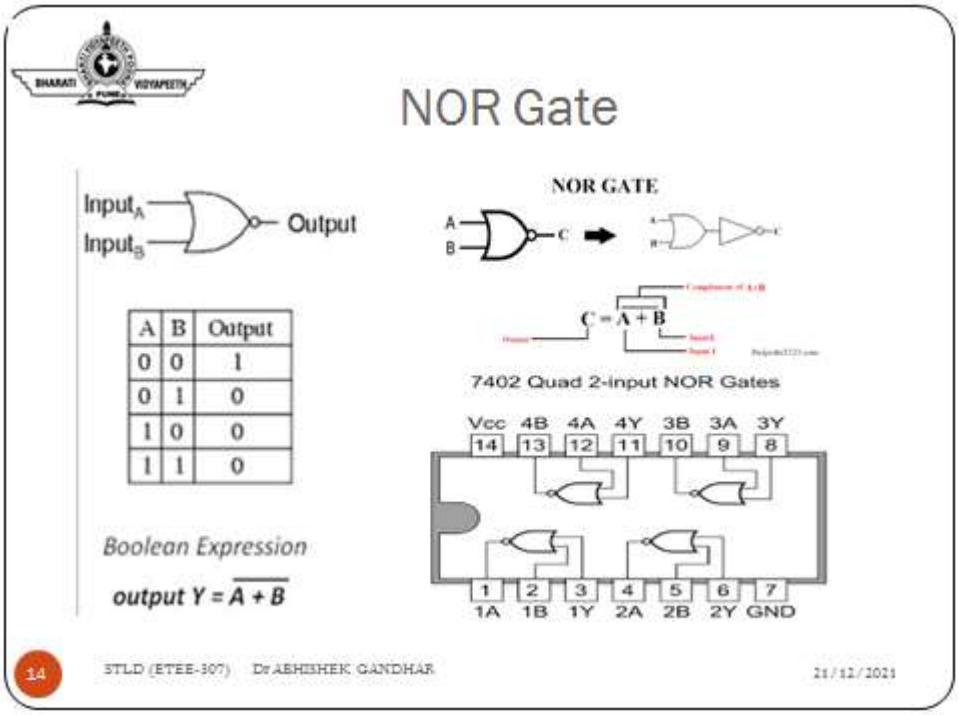


Figure 5.5.1 Sample PowerPoint presentation slide
(Course: STLD ETEE-307)

Figure 5.5.2. Lab demonstration Sample

Table 5.5.1 Expert Lectures

S.No	Name & Affiliation of Resource Person	Title of Expert talk	Date	Relevance with POs/PSOs
1.	Mr. Rajesh Kumar, Deputy General Manager(Smart Grid) Power Grid Corporation of India Limited.	Smart Grid, E-Mobility and Large Scale Renewable Integration in India	17.7.2018	PO1,PO6,PO7,PO12,PSO1,PSO2
2.	Dr. Subir Sen, Power Grid Corporation of India Limited.	Renewable Integration with Grid	16.7.2018	PO1,PO6,PO7,PO12,PSO1,PSO2
3.	Mr. A.N. Seshadri, Director, Smart Fuel Pvt. Ltd. Gurgaon.	Biomass and Bioenergy	10.4.2019	PO1,PO6,PO7,PO12,PSO1,PSO2
4.	Mr. Manish Kumar Tiwari, General Manager (Smart Grid) Power Grid Corporation of India Limited.	Optimization techniques in Renewable Energy Systems	06.02.2020	PO1,PO6,PO7,PO12,PSO1,PSO2
5.	Mr. Rajesh Kumar, Deputy General Manager(Smart Grid) Power Grid Corporation of India Limited.	Hybrid Renewable Energy Systems	07.02.2020	PO1,PO6,PO7,PO12,PSO1,PSO2
6.	Dr. Naser Hashemnia, Faculty member, Islamic Azad University, Mashhad, Iran.	Introduction to Self-Excited Induction Generator	01.10.2021	PO1,PO2,PO3,PO5, PSO1,PSO2
7.	Dr. Naser Hashemnia, Faculty member, Islamic Azad University, Mashhad, Iran.	Improved voltage and frequency control of a stand-alone doubly fed Induction Generator	05.3.2021	PO1,PO2,PO3,PO5, PSO1,PSO2
8.	Mr. Bipul Chakraborty, Ex General Manager NTPC.	Energy storage and battery management systems	08.9.2021	PO1,PO6,PO7,PO12,PSO1,PSO2
9.	Mr. Sudhir Kumar Jindal,Power Shift Incharge	Wind and hybrid energy conversion systems	09.9.2021	PO1,PO6,PO7,PO12,PSO1,PSO2

Table 5.5.2 Conference/Short term course/Symposium Details:

S. No.	Name of Program	Organizer	Duration
1.	National Student Symposium-TECHUDYAM 1.0	Department of Electrical and Electronics Engineering	10th April,2019
2.	2nd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI)	Department of Electrical and Electronics Engineering	6th& 7th February, 2020
3.	Short term course on "Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0"	Department of Electrical and Electronics Engineering	13th -17th July, 2020
4.	National Student Symposium-TECHUDYAM 2.0	Department of Electrical and Electronics Engineering	13th- 14th April,2020
5.	National Student Symposium-TECHUDYAM 3.0	Department of Electrical and Electronics Engineering	15th- 16th June, 2021
6.	Short term course on "Power System Restructuring & Renewable Energy Integration (PSRREI) 3.0"	Department of Electrical and Electronics Engineering	6th - 10th September, 2021
7.	3rd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI)	Department of Electrical and Electronics Engineering	3rd& 4th February, 2022
8.	National Student Symposium-TECHUDYAM 4.0	Department of Electrical and Electronics Engineering	17th- 18th May, 2022

Figure 5.5.3 2nd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 6th & 7th February, 2020 (Brochure).

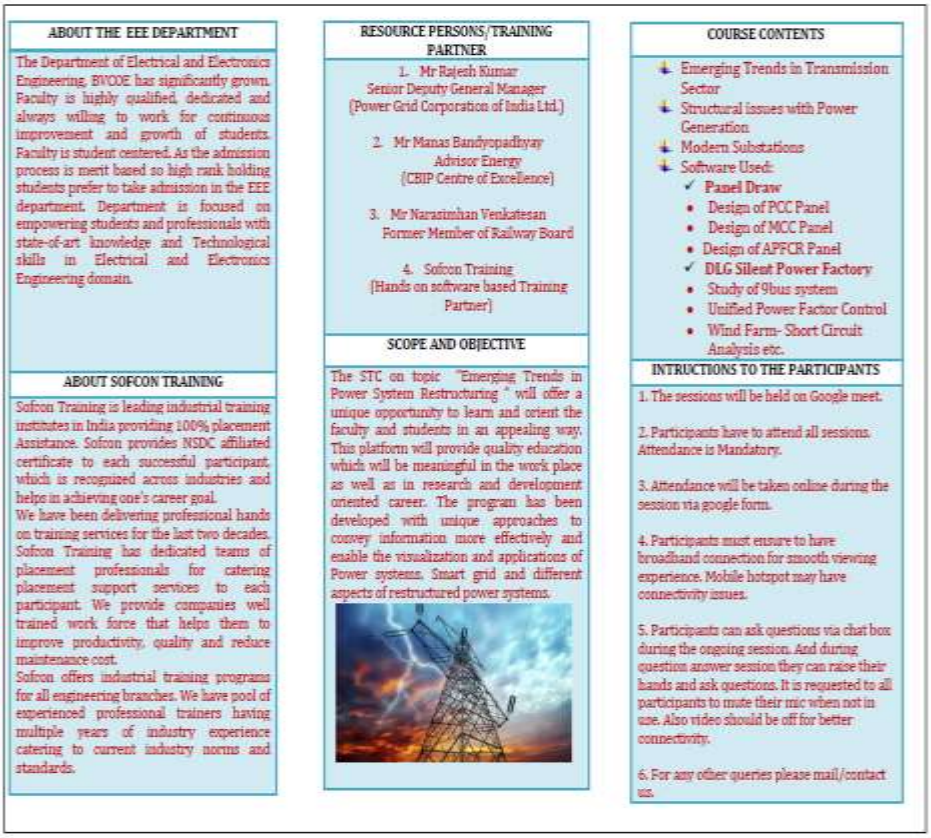
Figure 5.5.4. 2nd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 6th & 7th February, 2020(Inauguration).

Figure 5.5.5 2nd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 6th & 7th February, 2020 (Paper Presentation).

Figure 5.5.6 2nd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 6th & 7th February, 2020 (Glimpses).

One-Week Online Short term Course on
"Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0"
13 July 2020 – 17 July 2020
Organized By
Electrical and Electronics Engineering Dept.
BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING
Technical Partner
IET
The Institution of Engineering and Technology (IET)
In Association with
CHIEF PATRONS
Hon. Dr. Vishwajeet Kadam
Secretary, Bharati Vidyapeeth Pune
PATRONS
Prof. (Dr.) Dharmender Saini
Principal
BVCOE, New Delhi
HEAD OF THE DEPARTMENT
Dr. Kusum Tharani
COURSE COORDINATORS
Dr. Abhishek Gandhar
Dr. Sudha.K
Mr. Sandeep Sharma
ORGANIZING COMMITTEE
Mrs. Shashi Gandhar
Mrs. Gargi Mishra
Mr. Sandeep Banerjee
Mr. Bharat Singh
Mr. Neeraj Kumar
STUDENT COORDINATORS
Drishti Hans
Himanshu Goyal
Pranjali Bora
PARTICIPATION
Online Short Term Course (STC) is open to full time faculty members of AICTE/UGC recognized degree level engineering colleges/institutions, technical universities/deemed universities and other research/ training institutions. The course is also open to technical staff, research scholars, PG/UG students, practicing engineers and policy maker from utility and industry.
****** NO Registration fee ******
Registration Link
ABOUT THE INSTITUTE
Bharati Vidyapeeth's college of engineering, New Delhi established by late Dr. Patang Rao Kadam in 1999. It has strived to prove the best engineering education to its students through well qualified and dedicated faculty members and provision of well equipped modern labs. The college is affiliated to Guru Gobind Singh Indraprastha University, New Delhi and approved by All India Council for Technical Education (AICTE) Ministry of HRD of India. The college is aligned with the mission "Social Transformation through dynamic education" and is therefore committed to attaining global standards where knowledge is the key driving force in the rapidly changing globalized economy. BVCOE provides a platform for budding researchers to achieve their rightful place in the scientific community.

Figure 5.5.7 Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0, 13th – 17th July, 2020(Brochure_1)



ABOUT THE EEE DEPARTMENT

The Department of Electrical and Electronics Engineering, BVCOE has significantly grown. Faculty is highly qualified, dedicated and always willing to work for continuous improvement and growth of students. Faculty is student centered. As the admission process is merit based so high rank holding students prefer to take admission in the EEE department. Department is focused on empowering students and professionals with state-of-art knowledge and Technological skills in Electrical and Electronics Engineering domain.

ABOUT SOFCON TRAINING

Sofcon Training is leading industrial training institutes in India providing 100% placement Assistance. Sofcon provides NSDC affiliated certificate to each successful participant, which is recognized across industries and helps in achieving one's career goal.
We have been delivering professional hands on training services for the last two decades. Sofcon Training has dedicated teams of placement professionals for catering placement support services to each participant. We provide companies well trained work force that helps them to improve productivity, quality and reduce maintenance cost.
Sofcon offers industrial training programs for all engineering branches. We have pool of experienced professional trainers having multiple years of industry experience catering to current industry norms and standards.

RESOURCE PERSONS/TRAINING PARTNER

1. Mr Rajesh Kumar
Senior Deputy General Manager
(Power Grid Corporation of India Ltd.)

2. Mr Manas Bandyopadhyay
Advisor Energy
(CBIP Centre of Excellence)

3. Mr Narasimhan Venkatesan
Former Member of Railway Board

4. Sofcon Training
(Hands on software based Training Partner)

SCOPE AND OBJECTIVE

The STC on topic "Emerging Trends in Power System Restructuring " will offer a unique opportunity to learn and orient the faculty and students in an appealing way. This platform will provide quality education which will be meaningful in the work place as well as in research and development oriented career. The program has been developed with unique approaches to convey information more effectively and enable the visualization and applications of Power systems, Smart grid and different aspects of restructured power systems.

COURSE CONTENTS

- Emerging Trends in Transmission Sector
- Structural issues with Power Generation
- Modern Substations
- Software Used:
  - ✓ **Panel Draw**
    - Design of PCC Panel
    - Design of MCC Panel
    - Design of APFCR Panel
  - ✓ **DLG Silent Power Factory**
    - Study of 9bus system
    - Unified Power Factor Control
    - Wind Farm- Short Circuit Analysis etc.

INTRUCTIONS TO THE PARTICIPANTS

1. The sessions will be held on Google meet.

2. Participants have to attend all sessions. Attendance is Mandatory.

3. Attendance will be taken online during the session via google form.

4. Participants must ensure to have broadband connection for smooth viewing experience. Mobile hotspot may have connectivity issues.

5. Participants can ask questions via chat box during the ongoing session. And during question answer session they can raise their hands and ask questions. It is requested to all participants to mute their mic when not in use. Also video should be off for better connectivity.

6. For any other queries please mail/contact us.

Figure 5.5.8 Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0, 13th – 17th July, 2020(Brochure_2)

Figure 5.5.9 Power System Restructuring & Renewable Energy Integration (PSRREI) 3.0, 06-10 Sept, 2021(Invitation)

Department of Electrical & Electronics Engineering,
BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING
cordially invites you to the Inaugural ceremony of
3rd INTERNATIONAL CONFERENCE
on
RENEWABLE ENERGY POTENTIAL FOR SUSTAINABLE INITIATIVES
(REPSI-2022)

February 03,2022 **10:00 AM (IST)**

GUEST OF HONORS

Mr. S L Kapur
Board Member,
Central Power Research Institute, INDIA

Mr. R N Rajput
Group General Manager (Elect)
RVNL, INDIA
IET , CCSA

Dr. Berkin Imer
MD., Poles Group ,
Renewable Energy Companies,
TURKISH REPUBLIC

Dr. Kusum Tharani
Convener

Dr. Abhishek Gandhar
Convener

INAUGURAL PROGRAMME

(Google Meet Web-Link : meet.google.com/fio-wtnb-gvn)

PROGRAMME	TIME (IST)
• Opening Note: **Ms Shashi Gandhar & Dr Sandeep Banerjee**	10:00 AM
• Felicitation of Guests	10:05 AM
• Welcome address : **Prof (Dr) Dharmender Saini** (General Chair, REPSI-2022)	10:10 AM
• Opening Note : **Dr Kusum Tharani** (Convener, REPSI-2022)	10:20 AM
• Key Note Address : **Mr R N Rajput**	10:30 AM
• Key Note Address : **Mr S L Kapur**	10:40 AM
• Key Note Address : **Mr S L Kapur**	10:50 AM
• Vote of Thanks : **Ms Shashi Gandhar**	11:00 AM
----------**Presentation Sessions**----------	

Figure 5.5.10 3rd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 3rd& 4th February, 2022(Invitation).

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Figure 5.6.11. 3rd International Conference Renewable Energy Potential for Sustainable Initiatives (REPSI), 3rd& 4th February, 2022(Glimpses).