Prospectus

Job Oriented Program

26 Weeks Post Graduate Diploma Course
(CEA Approved)

in

Transmission and Distribution Systems with Automation SCADA/DMS
Starting – 10.01.2022

Central Board of Irrigation and Power
Centre of Excellence
Plot No-21, Sector-32, Gurgaon, Haryana
(Recognized as Grade A category-1 training Institute for providing training in the field of Hydro, Thermal, Transmission, Distribution and Power Management) Ministry of Power, Government of India)
Website- www.cbip.org
WHY YOU SHOULD JOIN?
The Indian Power Sector is changing substantially in its institutional arrangements for its regulation as well as the structure. Apart from technological and perception changes, major changes have been introduced in the Power Sector through Private participation, reforms and restructuring. It has further created a large demand for the trained persons in Electrical Utilities.
This is a Placement Oriented Graduate Engineering Program for those who desire to make a career in the Power Sector. On successfully undergoing this course the Graduate Engineer will find immense opportunities of employment in Indian Power Sector.

ABOUT CBIP AND THE COURSE:
A premier Institution established by Ministry of Water recourses in 1927 and now a registered society providing services to Indian Power, Renewable Energy and water resources sector. Recognized as Grade-A, Category-I, Training Institute by Ministry of Power, Government of India under CEA Regulations 2010. The course content complies with the syllabus for Engineers and supervisors for operation and maintenance of Transmission and Distribution Systems as per safety and electric supply regulations 7(3) of Govt. of India, CEA Certified.
The instruction and training methodology comprises 80% theory and 20% practical sessions. The main objective of the course is to create a technically and professionally trained manpower available for Power industry.

COMPANIES VISITED:
Many of our previous batch trainees are employed with reputed Organizations like TATA Power DDL, ERDA, Taurus Powertonics, Noida power (NPCL), Skipper Electricals (SEIL), Adani Transmission, Bajaj Electricals, Toshiba Transmission & Distribution, Manav Energy Pvt. Ltd., Lumino Industry (Kolkata), GEPDEC, Tata Projects and many others.

IMPORTANT POINTS

ELIGIBILITY: Bachelor of Engineering or equivalent in Electrical, Electrical and Electronics or Power Engineering or related branches from premier universities/ Institutes.

AGE LIMIT: No Age Limit.

SELECTION CRITERIA FOR ADMISSION: On merit basis (percentage of marks in Engineering and personal interview).

Merit list will be displayed on the website.

NO. OF SEATS: 60 (SIXTY ONLY)

FEES: Non Sponsored Candidates- Rs. 80,000
Sponsored Candidates- Rs. 1,00,000

SPECIAL OFFER: *Selective deserving candidates may be offered with discounted fees.

(*) Based on Merit. CBIP will decide during Counseling.

IMPORTANT DATES:
• Last date of receipt of application forms in all respects- 27.12.2021
• Display of merit list in website-29.12.2021
• Counseling and admission- 30.12.2021-09.01.2022.
• Commencement of the course- 10.01.2022.

For Registration and Prospectus Containing syllabus with course curriculum, please refer to our website www.cbip.org and contact our CBIP Officer as below.

ADDRESS FOR CORRESPONDENCE:
CBIP Centre of Excellence Plot No. 21, SECTOR-32, Gurugram-122001.
Contact- (A) Manas Bandyopadhyay- Mob No: 9871303367 and Email ID : Manasbandyopadhyay@cbip.org
(B) Jaideep Singh- Mob No: 9871718218 and Email ID : Jaideep@cbip.org
ABOUT CBIP, CENTRE OF EXCELLENCE

A premier Institution established by Ministry of Water recourses in 1927 and now a registered society providing services to Indian Power, Renewable Energy and water resources sector. Recognized as Grade-A, Category-I, Training Institute by Ministry of Power, Government of India under CEA Regulations 2010. The course content complies with the syllabus for Engineers and supervisors for operation and maintenance of Transmission and Distribution Systems as per safety and electric supply regulations 7(3) of Govt. of India, CEA Certified.

WHY YOU SHOULD JOIN CBIP FOR THIS COURSE?

Power Sector is a continuously expanding sector of Indian infrastructure contributing significantly to the GDP. The Indian Electricity Act, 2003 has opened private sector participation in the Transmission & Distribution of Power creating a large demand for the trained persons in Electrical Utilities. The main objective of the course is to create technically sound and trained manpower readily available for recruitment to the power utilities dealing with Transmission & Distribution of Electrical Power with Automation- SCADA/DMS and involving latest techniques for future. This is a job oriented Graduate Engineer Program for those who desire to make a career in the power sector. On successful completion of this course, the Graduate Engineers will get their knowledge and skills sharpened, paving the way for better employment opportunity in various power companies.

In order to mitigate the shortage of trained manpower Govt. of India has already taken many initiatives for providing training and developing the required manpower. However, the requirement of trained manpower is so high that there is a need of training/retraining of fresh and experienced engineers and groom them by providing the required training inputs and make them readily available for deploying them in the Power Sector as per its manpower requirements.

Keeping all these aspects in view, CBIP has taken this initiative to launch the 26 weeks Post Graduate Diploma Course in O&M of Transmission & Distribution System modular course following the syllabus of CEA Regulations 2010 for the fresh/ experience graduate engineers who would be groomed as per the requirement of Indian Power Industry. Hence, there is an ample scope of making a career in EPC (Tendering, Engineering, Procurement & Construction) Operation & Maintenance, QA/QC and Manufacturing under Transmission & Distribution System of Indian Power Sector for the fresh/ experienced Electrical Engineers who undertake this program.

STRENGTHS OF CBIP

- A 94 years old establishment into dissemination of knowledge in Power, Renewable and water resources sectors.
- Almost all reputed utilities of Power, Irrigation and Renewable sectors of the country are the institutional members of CBIP
- 3000 senior officers of the level of Chief engineer and above from these sectors are the members and more than 3600 engineers have been trained.
- Has a great networking and close relations with all reputed utilities of these sectors.
- CBIP, Centre of Excellence is located in posh and well connected place in Gurgaon.
- Has a strong base of the very senior officers with deep experience of various disciplines Power, Renewable and Water Resources sectors.
- Has state of the art infrastructure facilities like digitized library, well equipped lab, classrooms, conference hall, dining hall etc. well equipped with audio visual aids and Air conditioning system.
- Publishes very strong technical publications on very thrust areas in above three sectors.
- Has the secretariat of at least 10 international organizations and the Secretary CBIP is the secretary or the member secretary of their India chapters.
- A very strong Board with Chairperson, Central Water Commission as the President, Central Electricity Authority as the Sr. Vice President, Vice Presidents- Secretary (Government of Gujarat), Director (Solar) Solar Energy Corporation of India (SECI), Chairman & MD (NHPC Ltd.), MD & CEO (Adani Transmission Ltd. and Adani Power Ltd.), Secretary, Director -Water Resources, Director - Energy.
- CBIP has also signed a Memorandum of Understanding (MoU) with Indian Electrical and Electronics Manufacturers Association (IEEMA) which has a network of more than
940 member organizations from public, joint & private sectors like Siemens, ABB, Schneider, L&T and many other including good no. of organizations associated with Transmission & Distribution systems for collaborative ventures/efforts for enhancement of quality service through various activities viz., joint assignments, training programs, conferences, seminars, consultancy, R&D activities, joint studies and surveys, knowledge sharing and action plans identified by CBIP and/or IEEMA.

- Power Sector Skill Council (PSSC) is housed in CBIP premises at Malcha Marg, Chankyapuri, New Delhi, and CBIP is providing the secretariat support to PSSC. Chairman, CWC is the president and Shri A. K. Dinkar, Secretary, CBIP is Secretary of PSSC.
- Most of the organizations (Govt. sector & Private) of Indian Power sector involved in Generation, Transmission and Distribution of Power including Renewable Energy (RE), are the members of CBIP.
- CBIP has a strong team of senior training officers, having in-depth knowledge of conducting various long term training programs related to Power sector.

**DIGITAL RECOGNITION/ CERTIFICATION OF THE COURSE**

Certificate will be issued by Central Board of irrigation & Power (CBIP) which is a reputed autonomous body in the field of Power & Water Resources having liaison with various Govt./Semi-Govt./Pioneer-Pvt. Sector Organizations including Central Electricity Authority, NTPC, NHPC, Powergrid etc. CBIP institute has been recognized as Grade – A Category-I training Institute by Ministry of Power, Govt. of India under CEA regulations-2010. The syllabus of the course is as per the mandatory Training requirements specified in Central Electricity Authority regulations-2010. CBIP is also a recognized training partner of National Skill Development Corporation (NSDC), Power Sector Skill Council (PSSC) and Skill Council for Green Jobs (SCGJ)

**ABOUT THE COURSE:**

The course content complies with the syllabus for Engineers and Supervisors for Operation & Maintenance of Transmission & Distribution Systems as per Safety and Electrical Supply Regulations 7(3) of Govt. of India (CEA Certified). Methodology of the course includes-

- Classroom Lecture Sessions
- Sub-station and Switch yard visits from 33kV to 400kV AIS & GIS Substation
- On-Job Operation & Maintenance Training at different Substations
- Group Discussion session and Projects, Seminars
- Laboratory training on transformer, relays and others electrical equipments
- Manufacturing plant visit, maintenance plant visits etc.

**FACULTY**

In-house as well as Renowned/Reputed and well experienced 145 strong faculty members from Power Industry/T&D equipment manufacturers/Contractors like Adani, Tata Power, State Power Utilities /IIT/engineering colleges will be delivering the lectures for the entire program.

Note: In case of COVID situation changes we may have to follow Government guidelines and training program may change from physical to hybrid mode (all theory classes will be delivered through online mode and practical programs will be physical mode)

**DETAILED COURSE CURRICULUM**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Subject/Modules</th>
<th>Duration</th>
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</table>
| 1     | General Introduction to Power Sector Familiarization.  
| 2     | Electrical Safety and Statutory Regulations.  
Safety culture and best practices, Safety zone creation, Hazard identification & Risk Management, Incident Investigation, Incident Prevention, determine causes (Root Cause Analysis), Earthing, Protection, Safety/ Fire, Statutory Regulations, Safety Requirement, Hazards, Electrical Accidents and prevention, First Aid, Fire Fighting-Types of fire, fire fighting/system, fire extinguishers | 1 Week |
| 3     | Power System Studies Basic Electrical Engineering and its application with different voltage level-LV, HV, EHV & UHV.  
Power System Modelling, Load flow studies, Tutorial on load flow studies, Study state fault analysis, Tutorial on Fault Analysis, Transient stability studies, Relay Co-ordination studies, Tutorials, EMTP Studies. | 1 Week |
| 4     | Introduction to Grid Sub-station / Switchyard (AIS, GIS, HIS).  
Substation Type, Layout of substation, Equipment, Control & Instrumentation in Substations basics, Substation auxiliaries, Substation practices. | 1 Week |
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>EHV Substation Planning and Engineering</td>
<td>Substation Planning, Site selection, Layout of substation &amp; Civil works, Selection of main equipment, Selection of switchgear, Electrical clearances, Instrument transformers-selection &amp; Performance, Control &amp; Instrumentation in Substations, Substation auxiliaries, Substation grounding practices, Demo on grounding.</td>
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<tr>
<td>Substation Engineering and Practices with Design Calculation</td>
<td>Design aspects of Sub-station equipment- Product identification, Calculations and Technical Specification etc. as per IS/IEC/IEEE</td>
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<tr>
<td>Bus-Bar Scheme under Sub-Station Engineering</td>
<td>Different Bus-Bar Scheme under Sub-Station Engineering applicable in India’s Power Distribution Application</td>
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<tr>
<td>Communication in Power Systems</td>
<td>Communication systems: PLCC, Microwave, Leased lines, communication, Planning and selection of communication systems, Trends in communication, Telemetry, Tele control and Tele protection OPF, Satellite, Power Line Carrier Communication, Optical fibre communication, Satellite</td>
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<tr>
<td>Power Transmission Engineering and O&amp;M of Lines</td>
<td>EHV Transmission system in India, Tower types, Conductors, Earth wire, Insulators, Statutory clearances, Surveying, Route Alignment, Tower erection, Tower Testing, Stringing, Transmission Line Commissioning, Maintenance of transmission line, Thermo vision scanning, Hot line maintenance.</td>
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<tr>
<td>Distribution System Engineering</td>
<td>Distribution systems overview, Planning, Design and selection of pole structures conductors insulators etc., Pole erection, conductors stringing, Layout of earth wire, neutral wire guarding, jointing of conductors, etc.; Location, construction and erection of pole mounted sub stations; Selection, fixing of switches, fuses etc.; Operation &amp; Maintenance of Distribution Lines.</td>
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<tr>
<td>O &amp; M of Distribution Substations and Distribution Metering</td>
<td>Distribution Substation - types, layouts, bus bar arrangements; Selection of Distribution substation equipment, Distribution substation relay schemes, O&amp;M of Relay schemes, Substation Operation overview, Code of practice in Sub Station Operations, Work permits, line clear procedure, Maintenance of log books, Records etc., Distribution Substation Operation - Case studies; Types, design and construction of distribution meters, Failure analysis of Distribution Meters.</td>
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<tr>
<td>Indian Electricity Grid Code, Regulatory Issues and Tariff</td>
<td>Introduction to Indian Grid Code, Regulatory Issues, Methods of working out, Tariff structure, types, Inter-utility tariff</td>
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<td>Week</td>
<td>Course Description</td>
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<tr>
<td>19</td>
<td><strong>Smart Grid Technologies, IT, SCADA, DMS &amp; GIS in Distribution System</strong></td>
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<td>Smart Grid architecture, AMI, PMU, WAMS, PMU and WAMS technologies, Smart metering, Cyber security EV charging infrastructure, concept of V2G, G2V etc.</td>
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<tr>
<td>20</td>
<td><strong>Power Management and Market Regulations</strong></td>
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<tr>
<td>21</td>
<td><strong>Practical Experiences</strong></td>
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<td><strong>Live Project Demonstrations</strong></td>
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<td>Live project demonstrations on Power Distribution (Right from LV-220/430V, HV-11kV, MV-33kV to 66kV again extended upto 132kV and 220 kV voltage level)</td>
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<td><strong>Visits</strong></td>
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<td>Visits to Manufacturing works, Transmission Lines, Power Plants, Manufacturing units, Testing Centres, etc.</td>
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<td>Visits to Switchyard/ Substation from 33 kV to 220 kV AIS for Familiarization of equipments like Transformers, Circuit Breaker, Isolator, Lightning Arrestor, Control and Relay Panel, Control room building, switchgear and its function with operation (On-Job) and workshop practices. Distribution system on-job training mainly like 66/33/11kV- Single Line Diagram, Power Flow Diagram, Operational Logic, Interconnection Diagram between equipments via control cable and protecting the switchyard by Control and Relay Panel and finally practical training on Un-manned or state- of-art technology based substation i.e., SCADA/ DMS/ Automated Plant.</td>
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<td><strong>Lab</strong></td>
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<td>Lab Smart Meter Simulator Training, CT &amp; PT Testing, Transformer oil sample Testing, Relay Testing, Power System Studies, Instrumentation, Switchgear Labs.</td>
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<td><strong>High Voltage Testing for Power system Equipments</strong></td>
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<td><strong>Power Cables and Jointing Techniques</strong></td>
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<td>Power Cable - Design, Construction, Testing, Operation &amp; Maintenance; Trouble shooting of Power Cables; LT and HT Cable jointing, Termination and Accessories; Cable fault detection and repair; Demo on LT &amp; HT Power cable jointing - End joint &amp; Straight through joint.</td>
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<tr>
<td>22</td>
<td><strong>RE and Grid Integration</strong></td>
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<tr>
<td>23</td>
<td><strong>Quality Management ISO 9001:2005 Tendering, Engineering and Procurement / Material Management/ Personal Management</strong></td>
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<tr>
<td>24</td>
<td><strong>Project &amp; Final Appraisal</strong></td>
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<td>Seminars and Assessments, Weekly assignments, Module tests, Seminar, On Job Project Training Work Final Assessment.</td>
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<td><strong>Total</strong></td>
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**ELIGIBILITY**

- Bachelor of Engineering or equivalent in Electrical Engineering (EE) or Electrical & Electronics Engineering (EEE) or Power Engineering or Related with minimum 60% marks
- 2-5 Years’ experience in the relevant field will get added advantage for short listing.

Those appearing in their final year examination can also apply. However, they must submit their degree/provisional degree at the time of counseling/start of the course. The candidates shall also have to submit medical fitness certificate at the time of admission with no color blindness.
**ADMISSION FEE : 06 MONTHS**

(a) For Passed-out Engineering Student (Non-sponsored Category): Rs. 80,000/- including GST, excluding lodging & boarding (payable in two installments of Rs. 60,000 and Rs 20,000).

(b) For Sponsored Candidates: Rs. 1,00,000/- including GST, excluding lodging & boarding (may be paid in two installments of Rs. 80,000 and Rs 20,000.)

**SPONSORED CANDIDATES**

The Candidates who are sponsored from any organization have to enclose a sponsorship certificate from their respective organizations in the format given in the CBIP web site.

**HOW TO APPLY**

Application may be submitted through online through CBIP Website along with demand draft/multicity cheque of Rs. 500/- in favour of “Central Board of Irrigation and Power”. Points to be noted:

a. All the future notifications/ information will be available on CBIP website. The candidates are advised to be regularly in touch with the website.

b. Please Attach self attested copies of proof of Date of birth, certificates / mark sheets of 10th / 12th / Degree issued by Registrar/controller of the concerned university and send to neeraj@cbip.org/ manasbandyopadhyay@cbip.org

**ADDRESS FOR CORRESPONDENCE**

Shri A. K. Dinkar, Secretary CBIP
Shri Sanjeev Singh, Director (Energy), CBIP

**Nodal Officers:**
Shri Manas Bandyopadhyay, Advisor, CBIP, M: 9871303367 E-mail: manasbandyopadhyay@cbip.org
Central Board of Irrigation and Power,
Centre of Excellence, Plot No-21, Sector-32, Gurgaon, Haryana-122001
Tel No: 0124- 4380272, 4035267 E-mail: training@cbip.org

**IMPORTANT DATES**

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<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Dates</th>
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<tbody>
<tr>
<td>1</td>
<td>Date Of Advertisement in Employment News</td>
<td>30.10.2021</td>
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<tr>
<td>2</td>
<td>Last Date For Receipt of Application Forms in All Respects</td>
<td>27.12.2021</td>
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<tr>
<td>3</td>
<td>Display of Merit List in Website</td>
<td>29.12.2021</td>
</tr>
<tr>
<td>4</td>
<td>Counseling and Admission</td>
<td>30.12.2021 To 09.01.2021</td>
</tr>
<tr>
<td>5</td>
<td>Commencement of the Course</td>
<td>10.01.2022</td>
</tr>
</tbody>
</table>

**CLASS TIMINGS**: 10:00 AM - 5:00 PM Daily (Monday to Friday), Lunch 1:00 PM - 2:00 PM, Two-time Tea/ Coffee 15 Minutes break 11:15 AM and 3:15 PM.

**LODGING/ BOARDING**

Separate rooms and PGs are available for Ladies and Gents, during contact classes CBIP will assist for candidate lodging.

**GENERAL**

**PAYMENT PROCESS**

All selected candidate may do the Payment as per following details:

**Mode of Payment**

(a) By Cheque

(b) Demand Draft/ DD

(c) Net Banking through NEFT/ RTGS/ IMPS in favor of “Central Board of Irrigation and Power”, payable at Gurgaon
BANK DETAILS IN CASE OF E-TRANSFER

Beneficiary Name : Central Board of Irrigation & Power
PAN No. : AAAJC0237F
GST No. : 06AAAJC0237F1ZW
Complete Bank Details : Saving Bank Account
No. : 236701000000922
Branch RTGS/ NEFT/ IFSC : IOBA0002367
Branch Code : 2367

REFUND POLICY

Fee once deposited will not be refunded back. In case a selected candidate wishes to withdraw from the course for any reason, no part of course fee will be refunded except the security deposit.

HOW TO REACH CBIP CENTRE OF EXCELLENCE, PLOT NO-21, SECTOR-32, GURGAON, (TRAINING INSTITUTE)

Gurgaon, the second largest city in the Indian state of Haryana and is a part of the National Capital Region (NCR). It is about 15 Kilometers from IGI Airport, New Delhi. Gurgaon is well connected to Delhi via an expressway (NH 8 highway) and Delhi Metro.

FEEDBACK BY STUDENTS

Dear Sir,
Greetings of the day!
Hope you are doing well.
Hit myself Ritek Ray Chaudhuri. I was the PGDC (Sub. Transmission and Distribution with Automation SCADA/DMS) student of the Central Board of Irrigation and Power for the session of Jun'20 to Sep'20. I have successfully completed the course under the guidance of Mr. Manoj Bhandopadhyay. Energy Advisor, CBIP. I am really happy and grateful to Manoj sir as well as CBIP for giving me such an opportunity to learn and take real-time practical industry exposure.

Let me introduce something more about me: I'm an Electrical Engineer. I passed out B.Tech (EE) from the Maulana Abdul Kalam Azad University of Technology in 2019. Prior to joining CBIP I was working as a Turner Sales Engineer in Jskon Limited. It was the time of March 20 when the covid-19 pandemic came into the picture in India, the country went under lockdown phase. At that time I also took the decision to leave my job and to do something in the core domain area of interest i.e power system (Mainly T&D segment). I came to know about CBIP at that time, that was one of my life's turning points. I got the opportunity to switch any sector. Laterly speaking that time CBIP was just like a compass in the turbulent sea. Manoj sir was our mentor, he is just like GURU. I got endless support and neck hardship experience from him. Our curriculum was fully based on industry-oriented. So, I learnt a lot of things that I never thought of in my graduation. That's why CBIP is one of the perfect examples of "Industry-Academia Collaboration". I have also visited 66kV GIS, 220 kV GIS and substation and ERDA testing facility also.

I got ample opportunities for jobs from CBIP(Rs GPRC Limited, SN Consultants, TATA Projects, Taurus Power Electronics Pvt.Ltd. and Luminous Industries Limited. I hope more opportunities will come in future. Currently, I am working as Project Associate in Energy Analytics Lab at IIT Kharagpur.

So, I want to encourage all young engineers who are very much passionate about core engineering and want to pursue their careers in the core sector should join CBIP for learning as well as getting practical exposure for their bright careers.

Again, I would like to thank all the CBIP staff for their endless support.

Date: 02.04.2021
Thanks and Regards,
Ritek Ray Chaudhuri
Project Associate
Energy Analytics Lab
IIT Kharagpur

I am Saurav Goswami. I have successfully completed PGDC in sub Transmission and Distribution system under CBIP. First of all, I am glad and thankful to my institution, CBIP, my training faculty and Energy advisor Mr. Manoj Bhandopadhyay sir. I should also like to express my gratitude to all Employers of CBIP, ERDA.

I have learned so many things like sub station parameters (IS standard, specifications, testing), HV Transmission line, RE projects design, Smart metering system, Live projects etc. I have completed 1 month on job training in Gurugram. I visited 66kV GIS substation, 220/132kV sub station. I visited ERDA lab.

Most placement opportunities came by CBIP like GPRC LTD, SN CONSULTANT, TATA PROJECTS and Taurus Power Electronics Pvt Ltd. I have got placed as a Turner Engineer position under Taurus Power electronics Pvt Ltd. I am happy to get offer letter in academic situation. Honestly thanks to CBIP for give a platform.

I would motivate our young engineering students to join CBIP for their bright future, you would learn practical training in this course.

Thanking you,

Regards,
Saurav Goswami
Engineer (Trainee)
Taurus Power Electronics Pvt Ltd

Sent from RedmiPhone on Android