

# Job oriented Training Program

## **POST DIPLOMA COURSE** **in** **'TRANSMISSION & DISTRIBUTION SYSTEMS'** **Duration-26 Weeks**

**I BATCH (May 2019)**

## **PROSPECTUS**



## **NATIONAL POWER TRAINING INSTITUTE** **Power Systems Training Institute**

**(Ministry of Power, Govt. of India)**

**(An ISO 9001:2015 & ISO 14001:2015 Organization)**  
**Subramanyapura Road, Near Yarab Nagar Bus Stop,**  
**Banashankari Stage II, Bangalore- 560 070**  
**(KARNATAKA) INDIA**

[www.facebook.com/psti.npti](http://www.facebook.com/psti.npti)  
[www.twitter.com/psti\\_npti](http://www.twitter.com/psti_npti)

**TELEFAX: 080 26713758**  
**E-mail : pstinpti@yahoo.com**  
**pstinpti.training@gmail.com**

**TEL: 080-26934373/ 351/352**  
**Website : www.nptibangalore.in**  
**www.npti.gov.in/npti\_psti\_bangalore**



**NATIONAL POWER TRAINING INSTITUTE**  
**Power Systems Training Institute**  
(An ISO 9001:2015 & ISO 14001:2015 Organisation)  
Ministry of Power, Govt. of India  
BANGALORE-560 070



**Announces Job Oriented Training Programs for Diploma Holders**

**POST DIPLOMA COURSE IN  
TRANSMISSION & DISTRIBUTION SYSTEMS-26 WEEKS**

**ABOUT THE COURSES**

This is a job oriented **Post Diploma Engineer Program** for those who desire to make a career in the power sector. On successfully undergoing this course the Diploma Engineers will find immense opportunities of employment in Indian Power Sector.

The course content complies with the syllabus for Engineers and Supervisors for Operation & Maintenance of Transmission & Distribution Systems.

The instruction and training methodology comprises 60% theory and 40% practical Sessions. The main objective of the course is to create a technically and professionally trained manpower available for the Power Industry.

**PLACEMENT**

On successful completion of the PD Course, the trainees will get ample on-campus as well as off-campus opportunities to work in the core Power Sector.

**IMPORTANT DATES**

Issue of Prospectus	<b>8<sup>th</sup> March 2019</b>
Last Date for receipt of application forms in all respect	<b>29.04.2019</b>
Display of merit list in website	<b>30.04.2019 5:00 PM</b>
Counseling & Admission	<b>9<sup>th</sup>, 10<sup>th</sup>, 13<sup>th</sup> May 2019</b>
Commencement of the Course	<b>15.05.2019</b>

**IMPORTANT POINTS**

**ELIGIBILITY:**

Diploma in Electrical / Electrical & Electronics

✓ **AGE LIMIT:** No age limit.

✓ **SELECTION CRITERIA FOR ADMISSION:** Percentage of marks obtained in Diploma Course or equivalent examination as per University norms.

✓ **NO. OF SEATS:** 60 (Sixty only) in each course. 25% seats are reserved for sponsored category. Reservation for SC, ST, OBC & PH will be as per Govt. norms in the non-sponsored category.

✓ **FEES:**

Course Fee: Rs. 80,000 + 18% GST  
Rs.18,000/-Hostel charges (3-Seater) for residential candidates and canteen charges will be as per actual.

Education Loans are provided by Nationalised Banks to eligible candidates (Terms and conditions apply) Course Fee can be paid in 3 instalments.

**SPONSORED CANDIDATES:** The candidates sponsored by the companies, if fulfilling eligibility requirement, will be admitted directly as per the terms and conditions

**HOW TO APPLY**

Download the Application form from our website and send it as directed in the application along with a crossed **DD of Rs. 200/- in favor of "PSTI, Bangalore"**

**ADDRESS FOR CORRESPONDENCE**

**Head of The Institute**  
**National Power Training Institute**  
**Power Systems Training Institute**  
Subramanyapura Road, Banashankari II Stage, Near Yarab Nagar Bus stop,  
Bangalore-560 070

Tele Fax:080-26713758; Tel.080-26934373, 26934351, 26934352

email: [pstinpti@yahoo.com](mailto:pstinpti@yahoo.com), [pstinpti.training@gmail.com](mailto:pstinpti.training@gmail.com)

Website : [www.nptibangalore.in](http://www.nptibangalore.in); [www.npti.gov.in/npti\\_psti\\_bangalore](http://www.npti.gov.in/npti_psti_bangalore)

[www.facebook.com/psti.npti](https://www.facebook.com/psti.npti)

## ABOUT NPTI, BANGALORE

Power Systems Training Institute (PSTI), Bangalore is conducting high quality training courses in various facets of T & D since 1972. It is an established name in the Indian power sector. PSTI is located in its own 18-acre campus with office buildings, Laboratories, hostels, Guest house, Canteens and Residential colony. During the last 45 years, the Institute has trained many power sector personnel in the area of Transmission & Distribution of Power, who are manning various important positions in Power Sector of the Country. The PSTI, Bangalore is equipped with the laboratories for Power System Studies, Power System Simulation, Relay Testing and High Voltage Testing. The Hot Line Training Center, also a unit of NPTI in Bangalore, imparts live line maintenance training of High Voltage transmission lines up to 400KV. The Institutes have experienced Faculty members, Trainers, Laboratories, etc.

## WHY YOU SHOULD JOIN?

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.

This is a job oriented **Post Diploma Engineer Program** for those who desire to make a career in the power sector. On successful completion of this course, the Engineers will get their knowledge and skills sharpened, paving the way for better employment opportunity in various power companies.

## PLACEMENTS:

On successful completion of the PD Course, the trainees will get ample on-campus as well as off-campus opportunities to work in the core Power Sector.

## ELIGIBILITY:

**Diploma in Electrical or Electrical & Electronics Engineering**

## AGE LIMIT:

No age limit.

## SELECTION CRITERIA FOR ADMISSION:

Percentage of marks obtained in Diploma course or equivalent examination.

## NO. OF SEATS:

60 (Sixty) in both the courses. Reservation for SC, ST, OBC & PH will be as per Govt. norms in the non-sponsored category.

## FEES:

### PDC in T&D Systems

Residential/ Non- Residential	Course Fee	GST on course fee @ 18%	Lodging Charges (Optional) 3- Seater	Caution Money (Refundable)	Total including GST	1st Instalment	2nd Instalment
Residential	80,000	14,400	18,000	5,000	1,17,400	70,200	47,200
Non-residential	80,000	14,400	0	5,000	99,400	52,200	47,200

## SPONSORED CANDIDATES:

The candidates sponsored by Power Utilities/ Corporations/ Companies and fulfilling the eligibility requirement will be admitted directly may contact the office for information.

## HOW TO APPLY:

Application form along-with prospectus can be obtained from the Institute by paying cash of amount Rs. 200/- or by sending a self addressed A4 size envelope along with a Crossed Demand Draft for Rs. 200/- in favor of "**PSTI, Bangalore**".

**OR**

Download the Application form from our website and send it as directed in the application along with an E-Transfer receipt/ DD of Rs 200/- drawn in favor of "**PSTI, Bangalore**".

The application form complete in all respects along with the attested copies of documents listed in the application form are to be sent or submitted in person to the address mentioned below latest by **29.04.2019**. NPTI shall not be responsible for any postal delay or loss of mail.

## Address for Correspondence

Director/Head of Institute

**National Power Training Institute-PSTI,**

Subramanyapura Road, Banashankari-II Stage,

Near Yarrab Nagar Bus stop, Bangalore-560 070

Fax: 080-26713758

**Tel. 080-26713758, 26934373, 26934351, 26934352**

Email: [pstinpti@yahoo.com](mailto:pstinpti@yahoo.com)

Website [www.nptibangalore.in](http://www.nptibangalore.in), [www.npti.gov.in/npti\\_psti\\_bangalore](http://www.npti.gov.in/npti_psti_bangalore)

## IMPORTANT DATES

Issue of Prospectus	8 <sup>th</sup> March 2019
Last Date for receipt of application forms in all respect	29.04.2019
Display of merit list in website <a href="http://www.nptibangalore.in">www.nptibangalore.in</a> <a href="http://www.npti.gov.in/npti_psti_bangalore">www.npti.gov.in/npti_psti_bangalore</a>	30.04.2019 5:00 PM
Counseling & Admission	9 <sup>th</sup> , 10 <sup>th</sup> , 13 <sup>th</sup> May 2019
Commencement of the Course	15.05.2019

## BOARDING & LODGING

1. The total lodging / Hostel charges of Rs. 18,000/- for PDC in T&D Systems has to be paid at the time of admission by the residential participants.

## GENERAL

1. **Security Deposit:** An amount of Rs. 5,000/- as Caution Money (Refundable) against use of Library, Hostel, Stores, etc. is to be deposited by the student at the time of joining the Institute.
2. **Hostel:** No outsiders – known or relatives – shall be permitted to use hostel facilities for whole or part of the day.
3. **REFUND POLICY:**
  - A) **Refund on Discontinuation of the course:** In case a selected candidate discontinues from the program for any reason, no part of course fees and lodging charges will be refunded. The boarding charges excluding taxes and the security deposit will be refunded only.
  - B) **Refund on Completion of Course:** Only the Security Deposit will be refunded after the deduction of dues, if any.
4. **Late Fee:** If a candidate fails to deposit any installment of course fee by the due date, late fee @ Rs. 100/- per week will be chargeable from the due date.
5. The right of admission will rest with NPTI. Candidates found irregular in attending training or uninterested shall not be considered for placement and/or their course certification will be reviewed.

## Mode of Payment:

- Payments must be either in the form of **e-transfer** or **DD** in favour of **Power Systems Training Institute** payable at **Bangalore**.
- Name of the applicant & name of the course applied for shall be written on the reverse side of the DD.
- The bank transaction id and date shall be sent by mail to [pstinpti@yahoo.com](mailto:pstinpti@yahoo.com) in case of **e-transfers**.

### **Bank Details in case of e-transfer:**

- Name of the Beneficiary : Power Systems Training Institute, Bangalore
- Name of the Bank & Branch : State Bank of India, Banashankari II Stage Branch
- Address of the Branch : 9<sup>th</sup> Main Road, Banashankari-II Stage, Bangalore - 70
- NEFT IFSC Code : SBIN0006767
- Account Type : Current
- Account No. : 10031210203
- MICR No. : 560002008
- RTGS IFSC Code : SBIN0006767
- GSTN: : 29AAALN0083C17B
- Pan No.: : AAALN0083C
- Tan No: : BLRP00338C
- SAC (Service Accounting Code) : Commercial Training 999293

**Note: PSTI is a non-profit making educational institute. It does not come within the purview of I.T Act for deduction of tax at source vide 10(23C) (iii ab) of I.T Act 1961. Hence no tax deductions at source shall be done against PSTI payments. TAN No: BLR P00338C; PAN No: AAALN0083C.**

### **HOW TO REACH THE INSTITUTE:**

The Institute is about 10 KMs south of Bangalore City Railway Station/ Bangalore City Bus Stand from where pre-paid taxi / auto-rickshaw services are available. City buses also fly via Yarab Nagar bus stop (bus route Nos. 15C, 15E, 15H, 210A, 210R and 210E from Bangalore City Bus Station).

The Institute is about 45 KMs from Bangalore International Air Port. One can hire pre-paid taxi from the Airport to reach the Institute.

## Syllabus of PDC in T&D Systems

### **1. GENERAL INTRODUCTION-1 week**

Power Generation: Thermal, Hydro, Nuclear and Gas, Renewable Energy Sources Generation, Transmission & Distribution Scenario of India.

Types of generation: Conventional and Renewable, Thermal Power Plant, Hydro Power Plant, Gas Power Plant, Nuclear Power Plant, Co-generation.

### **2. Power Transmission Line Engineering- 4 weeks**

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, CAD, Software's used in Transmission lines, Tower testing at CPRI.

### **3. Hot line maintenance- 4 weeks**

Pole climbing, Tower climbing on 11kv, 32 kv,66kv, 110kv,220kv,400kv . Ropes, knots, cold line mtce, Hot line mtce, Tools mtce, Tools for different voltages, Safety equipment using, Substation mtce in live and cold, Tools in S/s. etc., Thermovision scanning, Hot stick method, Bar hand method.

### **4. EHV Substation Planning & Engineering- 1 week**

Substation Planning, Site selection, Layout of substation & Civil works, Selection of main equipment, Selection of switchgear, Electrical clearances, Instrument transformers-selection & Performance, Control & Instrumentation in Substations, Substation auxiliaries, Substation grounding practices, Practical Demo on grounding. Load flow studies, Tutorial on load flow studies.

### **5. High Voltage Testing of Power System Equipment - 1 week**

Testing of Power Transformers, Testing of Insulators, Testing of Surge Arrestors, Testing of Switchgear,

Testing of Transformer oil, Dissolved Gas Analysis.

### **6. Power System Protection - 1 week**

Overview of Power System Protection, CTs and PTs, Generator Protection, Transformer Protection, Transmission Line Protection, Transmission line voltages in Power Systems, Protection against over voltages, Insulation Co-ordination.

### **7. Operation and Maintenance of EHV Substation Equipment – 1 week**

Transformers-Construction, Connections, Tap Changing Mechanism & Parallel Operation, Testing and Protection of transformers, O&M of Transformers, Selection, Sizing, performance Analysis of HV Circuit Breakers, Transformer Neutral Earthing, O&M of HV Circuit Breakers, Operation and Maintenance of Distribution Transformers, Operation and Maintenance of Distribution Switchgear. Introduction to HVDC Transmission.

### **8. Distribution System Engineering - 4 weeks**

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, jumpering etc.; Location, construction and erection of pole mounted sub stations; Selection, fixing of switches, fuses etc., Operation & Maintenance of Distribution Lines.

### **9. O & M of Distribution Substations and Distribution Metering – 1 week**

Distribution Substation - types, layouts, bus bar arrangements; Selection of Distribution substation equipment, Distribution substation relay schemes, O&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.

### **10. Power Cables and Jointing Techniques-1week**

Power Cable - Design, Construction, Testing, Operation & Maintenance; Troubleshooting of Power Cables; LT and HT Cable jointing, Termination and Accessories; Cable fault detection and repair; Demo on LT & HT Power cable jointing - End joint & Straight through joint.

### **11. Electrical Safety and Statutory Regulations-1w**

Safety Requirement, Hazards, Electrical Accidents and prevention, First Aid, Firefighting-Types of fire, firefighting/system, fire extinguishers.

### **12. Labs – 4 weeks**

Despatcher Training Simulator-2w

Relay Testing, Power System Studies- 2w

HV Testing, Instrumentation -2w

Tower testing -1w

**13. Technical Visits-2 weeks:** Sub-stations, Transmission Lines, Power Plants, Manufacturing units, Testing Centers, etc.

\*\*\*\*\*





10. Educational Qualifications (Starting from highest qualification)

Sl. No.	Examination passed	Branch/ Subject	Year of passing	College/ University	Percentage of marks/class (as per University norms)
1.					
2.					
3.					
4.					

Self Attested photocopy of qualifying degree, mark sheet and proof of date of birth are to be sent along with application form.

11. Experience after Graduation (if any)

Sl. No.	Designation	Name of organization	Period of Employment		Nature of duties
			From	To	
1.					
2.					

12. Proof of Identity (attach copy)

(Employer ID/Passport/Driving License/PAN Number, etc)

13. Any other information:

(Offer of job in hand, continuing education, bond/liability/commitments etc.)

15. **List of Documents to be attached with the application:**

- Application fee of Rs. 200/- in the form of a crossed DD in favour of PSTI, Bangalore (In case the application is downloaded from website)
- One Passport size photo
- Self Attested photocopy of qualifying diploma and age
- Self Attested photocopy of Mark sheet of the qualifying degree & conversion formula obtained from university in case of Grade Points.
- Sponsorship Certificate, Experience Certificate, Salary Slips/Bank Statement (if applicable)
- Community Certificate (if applicable)

**DECLARATION**

The above furnished information are true to the best of my knowledge and belief. In case of anything found misleading or wrong or incomplete I agree that my candidature is liable to be rejected without any notice.

Signed on this \_\_\_\_\_(day) of \_\_\_\_\_(month) \_\_\_\_\_( year)

Place:

Signature of Candidate \_\_\_\_\_

Date :

Name (in full ) \_\_\_\_\_

**Note: Application complete in all respects along with the self attested copies of the documents indicated must reach:**

**The Head of Institute,  
National Power Training Institute,  
Power System Training Institute,  
Near Yarabnagar Bus stop,  
Banashankari II stage,  
Bangalore 560 070**

**on or before 29.04.2019**

**FOR**

-----  
**OFFICE USE ONLY**

**Enrolment No:**

**Application Fee for Rs. 200/- DD No.**

**Bank**

**Branch Code**

**Type of Candidature**

**Non-Sponsored**

**Certificate Proof attached:**

**Age**

Yes

No

**Qualification**

Yes

No

**SC/ST/OBC**

Yes

No

NA

**Sponsorship**

Yes

No

NA

