

Department of Electrical Engineering

The Department offers **Undergraduate, Postgraduate and PhD programmes in Electrical Engineering**. Well-equipped laboratories with state-of-the-art technology provide opportunities to students for hands on experience, thereby helping them in understanding the fundamental aspects; there are more such labs in the offing. Spacious air-conditioned classrooms and world-class infrastructure cater for an environment where students can learn independently as well as in a team. Our outcome-based curriculum and experiential learning opportunities meet the emerging challenges that graduates face in the field. Department aims to create globally competent engineers with a professional outlook, top notch researchers and highly inspired techno-entrepreneurs.

There are ample opportunities to students for their over-all growth and development. The research scholars are provided with independent space for experimental set up, access to leading international and national research journals, and simulation software.

The faculty is well experienced in both research and teaching and is focusing towards consultancy.

Programme Offered

Programme	Intake	Duration
B. Tech. Electrical Engineering	60	4 Years
M. Tech. Electrical Engineering (Power System)	25	2 Years

Research Areas

- 1) Power system optimization
- 2) Renewable energy
- 3) Distributed generation
- 4) Power quality
- 5) Dielectrics
- 6) Condition monitoring of power equipment

Infrastructure

Under Graduate Laboratories: General Electrical Laboratory, Semiconductor Laboratory, Electrical Machines Laboratory, Electrical Measurements Laboratory

Research Laboratories: Power Systems Computational Laboratory

Faculty Members

Name	Designation	Specialization	Experience
Dr. Yadwinder Singh Brar	Professor	Power system operation & control	26
Dr. Gagandeep Kaur	Associate Professor	Renewable energy, Distributed generation, Power quality	20
Dr. Deepika Bhalla	Assistant Professor	Power equipment, Transformer condition monitoring, Artificial intelligence	25

Events Organized

- Workshop on “**Advancements in Measuring Instruments**” in association with Key Sight Technologies Ltd. (April 17, 2017).
- Faculty Development Programme on “**Modelling & Simulation of Engineering Systems**” (January 9-15, 2017).
- Expert talk on “**Systematic and Advance Planning: probable solution of the energy problems in third world countries**”, by Dr D P Kothari (February 1,2018)

Faculty Participation/Paper Presentation in ConferencesFaculty

- Kaur, Gagandeep (2016),“**Real Power Loss Reduction in Distribution Network through Distributed Generation Integration by Implementing SPSO**” presented at *IEEE International Conference on Electrical Power and Energy Systems* at Maulana Azad NIT, Bhopal, MP, India.
- Brar, Yadwinder Singh (2016), “**Active and Reactive Power Dispatch using Predator Prey Optimization Approach**” presented at *IEEE 7th Indian International Conference on Power Electronics (IICPE 2016)* at Thapar University, Patiala, Punjab.
- Kaur, Gagandeep (2016), “**Optimization and Simulation of Smart Grid Distributed Generation: A Case Study of University Campus**” presented at *IEEE 4th International Conference on Smart Energy Grid Engineering* at University of Ontario, Institute of Technology (UOIT), Oshawa, Canada.

Faculty Publications

- Brar, Yadwinder Singh, (2017),“**Research Patterns and Trends in Software effort Estimation**”, *Information and Software Technology*, Vol.: 91, pp. 1-21, (Elsevier) (Author: Sehra, Sumeet Kaur, Co-author: Kaur, Navdeep)
- Brar, Yadwinder Singh, (2017), “**Evolutionary Computing Techniques for Software Effort Estimation**”, *International Journal of Computer Science and Information Technology*, Vol. 9, No. 2, pp-123-130. (Author: Sehra, Sumeet Kaur, Co-author: Kaur, Navdeep and Kaur, Gagandeep).
- Brar, Yadwinder Singh, (2017),“**Optimization of COCOMO Parameters using TLBO Algorithm**”, *International Journal of Computational Intelligence Research*, Vol.: 13 no.: 4,pp. 525-535.(Author: Sehra, Sumeet Kaur, Co-author: Kaur, Navdeep and Kaur, Gagandeep).
- Kaur, Gagandeep, (2017), “**Potential of Live Stock Generated Biomass: Untapped Energy Source in India**” *Energies*, Vol. 10, pp:1-15. (Co-author: Brar, Yadwinder Singh and Kothari, D.P.).
- Kaur, Gagandeep, (2017),“**Biomass Cells: A Key for Sustainable Rural Area Applications**”, *Indian Journal of Scientific Research*, Vol.8, Issue: 1, pp-109-113.(Co-author: Brar, Yadwinder Singh and Kothari, D.P.).
- Kaur, Gagandeep, (2017) “**Perspective of Estimated Energy Generation from Livestock Dung for an Indian State Punjab**”, *International Journal of Advanced Engineering and Research Development*, Vol.: 04, Issue: 10, pp-166-171. (Co-author: Brar, Yadwinder Singh and Kothari, D.P.).
- Kaur, Gagandeep, (2017),“**Boielectricity Generation from cattle Dung slurry by Metal Electrode Microbial Fuel Cell**”, *Interciencia Journal* Vol.:42, Issue: 11, pp-1-6. (Co-author: Brar, Yadwinder Singh and Kothari, D.P.).
- Bhalla, Deepika,(2018), “**Analyzing Short Circuit Forces in Transformer for Double Layer Helical LV Winding using FEM,**” *International Journal of*

Performability Engineering, Vol.: 14, Issue:3, pp:425-433. (Co-author: Bansal, Raj Kumar and Gupta, Hari Om.)

Short Term Training Programme attended:

- Dr Deepika Bhalla attended a *STC* on “**PLC practices and its Applications**” at NITTTR Sector 26, Chandigarh from 4th-8th September, 2017.

Academic Achievements and Awards Won by Faculty:

- Dr. Deepika Bhalla won the **ISTE Teacher Award of the section** for the year 2016 from Indian Society for Technical Education.

