



A short course in “**Power System Engineering, Operation and Management**” is offered in December 2018 to enhance knowledge and understanding of the practical applications of power system engineering and modern technologies in the energy sector.

Objective: The objective of this course is to ‘Bridge the Gap between Engineering Education and the Practical Workplace’ and to make transformative advancements in engineering education and professional training by integrating power system engineering theory with ongoing cutting-edge research trends and latest workplace technologies, products and practices, for the best interest of power engineering students & professionals.

Description: This course aims to develop and enhance relevant knowledge and skills related to all segments of the power system starting from electricity generation including latest renewable generation sources, the flow of power through high voltage transmission grid system to reduce losses and distribution of energy and power to end consumers at various voltage levels through a large network of distribution system. The course will prepare you to expand your knowledge about the power system SCADA, EMS and DMS technologies with latest technologically advanced products and solutions to operate and manage this complex set of resources, power grid and distribution network. Additionally, a site visit to a power system operation and control Centre for Ontario’s power grid will be conducted to see the overall system operations.

Course Outline:

Day 1: Fundamentals of power system, electrical circuits & power flow, protection & control
Day 2: Power System Components and Operation- generation, transmission & distribution
Day 3: Latest technologies and trends in power generation including renewable sources
Day 4: SCADA, EMS and DMS applications in transmission & distribution of power
Day 5: Site Visit to the power operation Centre; Operation of Ontario’s electricity market.
Project Management and other soft skills for power system engineers.
Course Test/Exam

Who should attend:

- Electrical, IT and others engineers with interest in energy & power system;
- Technocrats, technologists and other professionals in the field of power generation, transmission & distribution;
- Foreign-trained professionals.
- Graduate/ undergraduate students in (colleges and universities);

What will you receive after completion:

- Course Certificate of Completion along with CEUs and PDH (After completing an in-class short exam and evaluation which all attendees must pass)
- Course Materials in Paper Format
- Continuous support on career advice, resume building and skills development

Course Timetable:

- Monday, December 3rd, 2018 to Friday, December 7th 2018: 6.00 PM to 9.00 PM (with a brief coffee break; Coffee and snacks will be provided)
- Friday, December 7th: Site Visit to the Operation & Control Centre: 3.00 PM – 6.00 PM (Transportation and snacks will be provided)

Venue: Humber College of Applied Arts and Technology

205 Humber College Blvd, Etobicoke, ON M9W 5L7 (access to Hwy 427, 407 & 409)

Registration Fee: \$ 500 + GST/HST. (10% Discount to IEEE members)

Get a coupon for additional 10% discount for any future course till December 2019

For any questions, please contact:

Satish Saini, Chair Education Committee IEEE Toronto section
s.saini@ieee.org

Bio of Instructors:

Doug Houseman: Doug is a well known leader in grid modernisation with 40 + years of experience in the energy and utility industry and involvement in projects in more than 70 countries. He has been involved in IEEE's GridVision 2050, US Departmentn of Energy's QER and to revise CEATI's Distribution Utility Technology Roadmap. Doug is a NIST fellow and member of the GridWise Architecture Council (GWAC) where he had a hand in both the Smart Grid Interoperability Maturity Model and Transactive Energy. He has led the IEEE Power and Energy Society's Intelligent Grid Coordinating Committee and Emerging Technology Committee for the last five years. He has developed more than 20 tutorials for grid modernization for IEEE and others in addition to hundreds of other publications, presentations, workshops, papers and articles on grid modernization, power SCADA, Microgrids, AMR and many more.

Prof. Javeed Ahmed Khan: Prof Javeed has a PhD degree in electrical engineering in electrical energy systems and Bachelor's in instrumentation and electronics engineering. His 15 years of experience is spread across the globe in academia, consultancy and power industry. He has taught around 25 courses in electrical, electronics, control and computer engineering in different Universities and Colleges around the world. His major achievements are setting up of functional electrical and electronics engineering department and a lab at an engineering institute and many projects on solar powered electric car, vertical-axis wind turbine, Intelligent Electric Vehicle Charging System and many more. Javeed is a senior member of IEEE, and a Professional Engineer registered with PEO, Ontario and APEGA, Alberta.

Satish Saini: With Bachelor's degree in Electrical Engineering and numerous advanced courses in power, energy and management, Satish is a Licensed Professional Engineer registered with PEO, Canada. He has an extensive 33 years of accomplished management experience in various fields of energy and power at global level. Majority of his experience is in electrical utility operations and management at senior level, business development and project management related to renewable energy, smart metering / AMI, Advanced Distribution System (ADS) / Smart Grid, DSM and DMS. He has been involved in hiring, training and mentoring a diverse work force from various backgrounds. He is an active member of IEEE in various committees, Task Forces and Working Groups related to Smart Distribution, Smart Grid, MicroGrids and Smart Cities. He has a strong vision of developing the aging DS Grid with latest innovative technologies and solutions along with transforming utilities through smart grid programs. Mentoring and training young and foreign-trained professionals is one of his strongest passion.