The Short Course will be held in the beautiful campus of Islamic University of Technology (IUT) at Board Bazar, Gazipur, Bangladesh about 13 km north from the international airport of Bangladesh. Additional information about IUT campus is available at the website <www.iutoic-dhaka.edu>.

Faculty members in the universities who are intended to conduct research in the power system as well as Transmission and Distribution Engineers, Power System Designers and other Technical Personnel can attend this course.

For Whom

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The objective of this course is to introduce participants to the challenges of modern electrical power systems related to stability and its remedy through FACTS. The course will present the basic concepts, principles and operation of fast high power electronic controllers known as Flexible AC Transmission Systems (FACTS) that enhance power system stability and effectively increase transmission capacity thus yielding significantly higher flexibility of operation. The course will focus on VSI based FACTS modeling, simulation and control.

Overview of the items to be covered:
1. Introduction to Power System Stability
2. PWM Based Voltage Source Inverter
3. Introduction to FACTS Technology
4. FACTS in Bangladesh: Present status and Future Scopes
5. Modeling of FACTS: SSSC & STATCOM
6. Modeling of FACTS: IPFC & UPFC
7. Simulation of SSSC
8. Simulation of STATCOM
9. Simulation of IPFC
10. Simulation of UPFC
11. Control of FACTS
12. Control of FACTS: Simulation

Flexible AC Transmission System (FACTS) technology is fast becoming an integral component of modern power transmission systems around the world. FACTS offers a rapid, effective and reliable solution through control of high-power electronic devices. The focus of this short course is to introduce the participants with the detail of dynamic modeling, simulation and control of FACTS technology.

The course will also address key challenges that researchers, professionals and experts of power system face when dealing with the FACTS devices. The course will focus on the operating principles and more importantly, on the control techniques for the FACTS Devices in achieving different objectives such as voltage regulation and enhancement of power system stability.

Course Outcome
After accomplishing this course the participants will be able to:
* understand the basic operating principles of PWM based VSI
* analyze the functional operation and control of SSSC, STATCOM, IPFC and UPFC
* get acquainted with the significance of shunt/series compensation and role of FACTS devices on system control
* implement the control and analyze the effect of incorporating FACTS into conventional power system.

Organised By-
Department of Electrical and Electronic Engineering
Islamic University of Technology (IUT)
Organisation of Islamic Cooperation (OIC)