Energy Consulting

Engineering Courses

Power System Analysis and Symmetrical Components

Training objectives:

Course participants will receive instruction in the fundamentals of Electric Power System Analysis, beginning with the development of Alternating Current power concepts & Ending with analysis of unbalanced faults on large electric power systems. This course is the starting point for further work in electric power system engineering and operation.

The course is intended for:

Engineers, system operators and technicians new to the industry who work for power generation, transmission, load serving (i.e. distribution) or industrial companies (or transitioning to technical activities within) and who are tasked with:

- Evaluating performance of new and/or existing power system transmission, distribution or utilization configurations
- System Operations of large to small electric power systems or power plants and auxiliary systems
- Analyzing faulted power system conditions
- Coordinating and setting protective relays, fuses and other protective devices (additional courses in protective relaying and/or insulation coordination will be required and are strongly recommended)
- Analyzing electric power system stability (additional courses in Synchronous Machines and Power System Stability are strongly recommended)

Main features:

- Development of Alternating Current power equations
- Introduction to analysis of three phase power systems
- Equipment modeling for power flow analysis (e.g. generators, transformers, transmission lines and voltage control equipment
- System Power Flow modeling and analysis
- Introduction to method of Symmetrical Components
- Analysis of unbalanced systems via method of symmetrical components
- Symmetrical Component Representation of power system equipment
- Fault Analysis of electric power systems

Recommended prior knowledge:

Complex arithmetic and knowledge of fundamental electrical engineering concepts (DC and AC circuit analysis, circuit equivalent representation through transient behavior of AC and DC circuits is recommended pre-requisites.

Note: The course is held in English. Class subject to change. Class times are 8-4.

For more information visit: **www.geenergyconsulting.com**

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