



ELECTRICAL AND ELECTRONICS ENGINEERING

A one-day skill development program on
“Advanced Power Electronic Devices & their applications to Power Systems”

Under TEQIP-II Finishing School

on 07-12-2013 from 10.30 a.m to 1.15 & 2.15 to 3.15 in E-Class Room

Dr. Siva Sarma DVSS, Professor in Electrical Engineering Department, NIT, Warangal delivered lecture on Advanced Power Electronic Devices & their applications to Power Systems. He majorly focused on

Need for Transmission Interconnections

To connect the load centres to generation locations

- Taking advantage of diversity of loads
- Minimize Total generation capacity
- To minimize the cost per unit of electricity
- Improve the reliability of power supply
- Enables sharing of reserve capacities
- Forms an effective electric grid

What are the problems with AC/DC interconnections?

- As power transfers grow, power systems grow in size and complexity
- As the system becomes more complex, difficult to operate
- System becomes less secure for riding major outages
- Large power flows with inadequate control
- Excessive reactive power requirements
- Full potential of transmission networks cannot not utilized due to dynamic swings between different parts of the system

His talk was enlightening the students on role of advanced power electronic devices in power systems. He discussed about basic concepts of facts controllers and their characteristics. He focused on design & conceptualized skills of power electronic devices and their applications based on reactive power compensation, voltage control and stability improvement techniques in power systems.



Dr. Siva Sarma DVSS, Professor in Electrical Engineering Department, NIT, Warangal delivering the lecture