

Course: Steam and Gas Power Systems

Course Code: noc17-me12

Session: 2016-17

Duration: 8 Weeks

Assessment procedures: Weekly Assignment (25%) + proctored certification Exam (75%)

Curriculum of the Course:

Week 1:

- Review of Thermodynamics, Rankine Cycle, Performance of Rankine Cycle, Binary Vapour Cycle and Co-generation, Problem Solving

Week 2:

- Steam Generators, Fire Tube Boilers, Water Tube Boilers, Boiler Mountings and Accessories, High Pressure Boilers- LaMont and Benson Boilers

Week 3:

- High Pressure Boilers- Loeffler and Velox Boilers, Draught, Performance of Boilers,
- Combustion of Fuel, Problem Solving

Week 4:

- Boiler Trial, Nozzles and Diffusers-Momentum and Continuity Equations, Nozzles and Diffusers-Efficiency and Critical Pressure, Nozzles and Diffusers-General Relationship and supersaturated Flow, Problem Solving

Week 5:

- Steam Turbines, Compounding of Steam Turbines, Impulse Steam Turbines, Impulse Steam Turbine Performance, Problem Solving

Week 6:

- Impulse-Reaction Steam Turbines, Impulse-Reaction Turbine, Performance, Multistaging of Turbines, Condensers, Problem Solving

Week 7:

- Gas Turbine Cycles, Gas Turbine Cycle- Performance Evaluation, Gas Turbine Cycle- Effect of Operating Variables, Problem Solving, Centrifugal Compressors

Week 8:

- Centrifugal Compressor Characteristics, Axial Flow Compressors, Axial Flow Compressor Characteristics, Combustion Systems, Problem Solving

List of students enrolled

S. No.	Name of Student
1.	Abhishek Patel
2.	Anant Kapoor

3.	Pushpendra Khuntwal
4.	Anurag Singh