Day 1

- Module 1: Introduction
  - Learning Objectives
  - Boiler Personnel
  - Boiler Operation
  - Jurisdictional Authority
  - Boiler Code History
  - Boiler Codes and Standards

- Module 2: Boiler Classification
  - Definitions, boiler classifications
  - Power boilers, heating boilers
  - Water tube boilers, fire tube boilers

- Module 3: Boiler Auxiliary Systems
  - Air system
  - Fuel system
  - Steam system
  - Feedwater system
  - Draft system
  - Blowdown system
  - Boiler Appurtenances
  - Boiler Accessories

- Module 4: Combustion Systems
  - Fuels
  - Combustion
  - Combustion Systems
  - NOX

- Module 5: Boiler Calculations
  - Formulas
  - Conversion Factors

- Module 5.1: Calculations Workshop

- Module 6: Boiler Controls and Safety Devices
  - Controls
  - Safety Devices
  - Periodic Testing
  - Steam and waterside controls
  - Combustion side controls
• Typical fuel trains
• Installation reports
• Control checklists

• Module 7: Boiler Operations
  – General guidelines
  – Preparation for operation
  – Condensation
  – Starting-up
  – On-line operation
  – Out-of-service Operation

• Module 7.1 Operation log sheet

• Module 8: Boiler Maintenance
  – Maintenance program
  – Maintenance Tools
  – Boiler cleaning
  – Tube expansion
  – Maintenance program
  – Maintenance checks
  – Trouble Shooting
  – Repairs and Alterations

• Module 8.1 Maintenance log sheet

• Module 9: Water Treatment
  – Boiler water troubles
  – Deposits, corrosion
  – Water analysis
  – Water treatment methods
  – Laying up of boilers

• Module 10: Boiler Failures
  – Overpressure
  – Weakening of structures
  – Furnace explosions
  – Furnace implosions
  – Management of Change (MOC)