Site Evaluation & Crane Setup
- Roles and responsibilities of all persons involved with the lift
- Factors that impact the lift such as tail swing, load path and clearances
- Impact of various weather conditions
- How to deal with unstable ground and setup on soft surfaces
- Hazards such as overhead obstructions, power lines and underground hazards
- Standards and guidelines regarding various risks and hazards
- ASME standards and OSHA regulations
- Requirements of crane setup such as radii, clearances, crane dimensions and load dimensions
- Crane setup procedures such as use of outriggers, lifting on rubber and leveling the crane
- Site requirements for blocking

Technical Information
- Crane inspection procedures
- Crane components including the following:
  - Engine, air, electrical & hydraulic systems
  - Chassis & running gear components
  - Outriggers and counterweights
  - Boom components
  - Hoisting systems
  - Operating controls
  - Operational aids
  - Basic load rigging procedures
  - Knowledge of sling and hardware capacity
  - Impact of deformities in slings and hardware

Load Charts
- Using/Interpreting capacity charts
- Arithmetic skills without the use of calculators
- Determining lifting capacity, including:
  - Configuration of crane mounting
  - Areas of operation for different types of mobile cranes
  - Boom length and boom angle
  - Load radius
  - Gross capacity and net capacity
  - Capacity deductions
  - Parts of line
  - Conditions that reduce capacities, including:
    - Crane not to specification
    - Crane condition
    - Crane level
    - Wind
    - Side loading
    - Increase in load radius
    - Dynamic loading
    - Shock loading
    - Eccentric reeving
    - Duty cycle operations

Crane Operation
- How to enter and exit the cab of the crane in a safe manner
- Procedures for setup and usage of operational aids
- Hand signals or voice signals used to direct crane operator
- Handling loads out of operator’s sight (operating in the blind)
- How to handle loads submerged in water
- How to move loads from an elevated position
- Duty cycle considerations (i.e., steel erection, concrete bucket operations)
- Traveling the crane
- Heavy lift operations, procedures and types of heavy lift attachments
- Attachments for luffing jibs
- Hoisting procedures and personnel hoisting equipment
- Procedures for securing the crane under standard and emergency conditions