Hydrotreating and Catalytic Reforming - Part 1

**Course Description:**

Refineries develop and improve products such as high-octane, low-knock gasoline; aviation fuel; and petrochemical feedstocks. The major role of hydrotreating and catalytic reforming units is to work together to produce these fuels and petrochemical feedstocks. This course examines the reactions and equipment that are involved in hydrotreating and catalytic reforming and identifies the process variables that have to be monitored and controlled.

**Learning Objectives:**

- Explain what hydrotreating and catalytic reforming are
- Identify the major sections of typical hydrotreating and catalytic reforming units
- Describe the major chemical reactions that occur during hydrotreating
- Describe the major chemical reactions that occur during catalytic reforming
- Explain how a reforming catalyst promotes reforming reactions
- Explain how recycling hydrogen protects a reforming catalyst
- Identify the major components of a typical hydrotreating unit
- Describe the functions of the major components of a typical hydrotreating unit
- Identify the major components of a typical catalytic reforming unit
- Describe the functions of the major components of a typical catalytic reforming unit
- Identify process variables that are monitored and controlled during hydrotreating
- Explain why these process variables are important to hydrotreating
- Explain the relationship between octane number and yield
- Identify process variables that are monitored and controlled in the reaction section of a catalytic reforming unit
- Explain why these process variables are important to catalytic reforming
- Identify process variables that are monitored and controlled in the separation section of a catalytic reforming unit
- Explain why these process variables are important to catalytic reforming