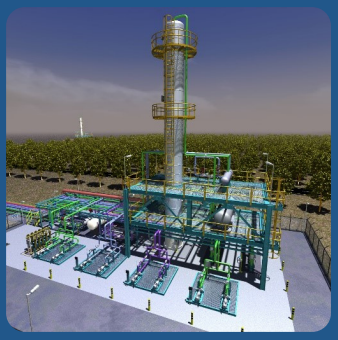
Fractionation Operations for Early-Career Engineers

SIM-FOE



This interactive 2-day course combines elements of high fidelity, generic process simulators as well as a student-driven learning model centered around the INSTO Methodology. The course allows early-career engineers an opportunity to explore the same system dynamics and process upsets that plant operators face.

In this course each trainee will have access to their own generic simulators including a Heat Exchanger, Flash Drum, and Fractionation simulator. Trainees will have an opportunity to startup each piece of equipment as well as spend time troubleshooting common malfunctions relating to exchanger and separating units. Tower operations that promote both safety as well as optimization are stressed throughout the course. The material of the course is applicable to refineries, petrochemical sites, chemical plants, and any other facilities that operate distillation columns.

LEVEL- Foundation

DESIGNED FOR

This training course is useful for Early-career process or controls engineers that would benefit from an operations bootcamp.

YOU WILL LEARN HOW TO

- Manually operate and optimize a cascade loop in a counter current shell and tube heat exchanger
- Determine the effects of product yields and product purities in flash drums as well as distillation columns
- Identify key operating points in a distillation column including the effects of changing throughput, operating temperature, operating pressure and reflux ratio have on product specifications
- Analyze trends and relate this information to various normal and abnormal situations for exchangers, flash drums and distillation columns
- Utilize the Think EQ.U.I.P.P.E.D. method to expand troubleshooting options while operating a distillation column
- Discuss and simulate HAZOP analyses on common troubleshooting scenarios with exchangers and distillation columns focusing on specific mitigation techniques
- Assess critical safety concerns during the startup or restart of exchangers and distillation columns as well as simulate these startup procedures
- Practice techniques for distillation column optimization including dynamically adjusting column operating conditions to meet new specifications determined by simulated changes in feedstock or market conditions