Course Overview

Course number: OTS-0007-AT  
Course length: 5 days (self-paced with 10 days to complete)

Need to improve safety, reliability and performance?

This course provides participants the ability to develop competencies for the role of console operator involved in distillation operations:

- Develop fundamental operating knowledge and skills
- Develop knowledge of unit operations and management
- Operate process plant under normal conditions
- Anticipate and respond to abnormal conditions

The course is offered for self-paced exploration and learning using a generic distillation process simulation model typical within the industry. The student follows a structured lesson plan while interacting with a virtual process plant training simulator using an emulated console, schematics and faceplates.

The course begins with an orientation presentation which provides an introduction to the process model along with an overview of the course objectives, tools and how to ask for help. This followed by four self-paced lessons.

- Lesson 1: Introduction to the process
- Lesson 2: Key process variables, Instrumentation and Control - Gain an understanding of the process response when a change is made to key operating variables.
- Lesson 3: Process Disturbances. Learn to adjust the operating strategy in order to compensate for equipment failure or out of specification stream conditions.
- Lesson 4: Start-up and Shutdown Operating Procedures - Practice startup and shutdown of the unit using detailed operating procedures.

Each lesson starts with statement of the lesson objective. The student then progresses through a learning session, application session and review session in sequence. The application session involves a practical exercise using a simulation of the plant and operator console. This type of interactive learning has been shown to be the most effective for knowledge transfer. The evaluation session provides the student with timely relevant feedback in the form of a quiz. Immediate feedback is another key success factor for effective knowledge transfer.

Course Benefits

Working at their own pace participants acquire a better understanding or process plant operations including start-up, shutdown, and normal operations and responding to upsets and emergency situations.

- Use best in class UniSim Competency Suite products
- Conveniently accessible through the web
- Use the UniSim Operations Operator Training Simulator to improve knowledge transfers effectiveness

Course Delivery Options

- Asynchronous Training (AT)

IMPORTANT – Prior to registration for the e-learning courses (LW, RT, VT, and AT), you must perform the User Readiness Test. Go to Virtual Training Access Requirements to perform this test.

Who Should Take This Course?

Console Operators, Process Engineers, Operations managers and supervisors in the process industry. Participants benefit from the development of process related competencies and become more effective in their job roles.

Prerequisite/Skill Requirements

Prerequisite Course(s)

- None

Required Skills and/or Experience

- Familiarity with websites
- Basic process plant operations knowledge or experience ideally in a distillation context
- Basic knowledge of process plant control and safety systems ideally in a distillation context
- Basic knowledge of process plant control console features ideally in a distillation context

Desirable Skills and/or Experience

- Experience of distillation process operations
- Familiarity with distillation plant procedures and DCS console functions
Course Topics

Familiarization with distillation process equipment and controls.

Key distillation process variables and control:
- Reboiler Temperature Control
- Column Feed Flow Control
- Reflux Drum Pressure Control
- Product Composition Control
- Column Temperature Controller

Process disturbance and recovery:
- Ambient Air Temperature change
- Cooling Water malfunction
- Feed Temperature change
- Fouling of Reboiler
- Level Transmitter malfunction
- Pressure Transmitter malfunction
- Product Quality Analyzer malfunction
- Reflux Pump malfunction
- Condenser Fan malfunction

Start-up and Shutdown Operating Procedures

You will
- Learn about the fundamentals of distillation process plant operation though practical application using simulation technology
- Identify key process variables and controls encountered in operation of distillation equipment and gain an understanding of process interactions
- Learn about distillation plant start-up and shutdown and practice the procedures in the safety of the simulated plant.
- Respond to that challenge of abnormal situations and learn how to recover from the impact of external influences.
- Receive immediate feedback using short quizzes
- Gain confidence to tackle day to day real world operations challenges

Additional Training

To increase your knowledge and skills, there are additional courses available from Automation College.

For more information and registration, visit www.honeywellprocess.com/en-US/training.