

# 2-DAY TROUBLESHOOTING SKILLS TRAINING COURSES



"IMPROVING TROUBLESHOOTING AND CRITICAL THINKING SKILLS OF CONSOLE AND OUTSIDE OPERATORS THROUGH A PROVEN COMBINATION OF CLASSROOM AND SIMULATOR BASED TRAINING EXERCISES."

# \*NOW INTRODUCING VIRTUAL TROUBLESHOOTING COURSES\*

If preferred, course can now be delivered in a completely virtual format. Each trainee will need access to the following:

- A windows-based PC where the software will be installed ahead of training.
- A headset with microphone due to the high level of interactivity of the virtual course.
- A dual monitor set-up. One monitor for the software and the second monitor to access a virtual conference where trainee answers will be logged.

### **COURSE INSTRUCTOR**

Donald Glaser
Vice President
B.S. Chemical Engineering
Simulation Solutions, Inc.
Lafayette College

- 40+ years of international OTS experience
- Published authors and presenters
- Personally conducted dozens of OTS courses
- Developed 5 step INSTO™ methodology

#### COURSE OVERVIEW

2-Day courses allow operators to improve their skills using generic training simulators. Simulation Solutions uses a unique blend of DCS simulation, a virtual reality "outside operator", and comprehensive course exercise booklets in order to help operators develop new Operating Mechanics as well as a new Operations Mindset™.

120+
Training
Courses
Conducted

1400+
Operators
Trained

Comprehensive Training Solution

# WHO SHOULD ATTEND?

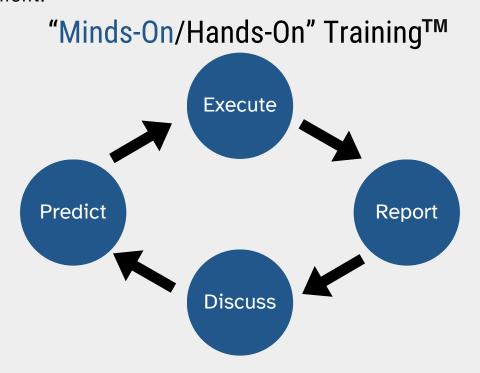
Console Operators
Field Operators
Early-career
Process Engineers

## COURSE CATEGORIES

Refining & Petrochemical
Fired Heater Operations
Plant Utilities
Pumps & Compressors
Batch Operations
Power Plant Ops. A & B

#### COURSE FOCUS

Using an innovative approach to both Classroom and Simulator Exercises, the courses focus on improving Operator Safety, Critical Thinking Skills, Competency and Hands-On skills in Operating and Troubleshooting. Each course focuses on fundamental, yet comprehensive, individual and team exercises which promote trainee-driven learning. These exercises in the Course Exercise Booklets follow our INSTOTM methodology and use a Minds-On/Hands-On TrainingTM Strategy. This allows Trainees to maximize their training investment.



At the end of each course, trainees complete a course survey, which acts as feedback to help with future course improvement. In addition, trainees complete a self-assessment to identify operator strengths and weaknesses. For comparative purposes, supervisors are also asked to assess their operators' skills.

#### OPERATOR OBSERVATIONS

- "The troubleshooting and critical thinking skills that I learned from this course will help me in running my own unit."
- "The most useful course I have ever attended on site."
- "Pitched perfectly for new and experienced panel operators."

### WHAT YOU WILL LEARN - INSTO APPROACH

#### Identification:

Learn how to come onto a new plant and figure out what's there and how it is connected using P&IDs, the plant itself, and the controls.



#### Normal Operations:

Understand how the plant runs under normal conditions and learn/develop a sense of "expected results" when making operational moves on a plant.

#### Start-Up and Shut-Down:

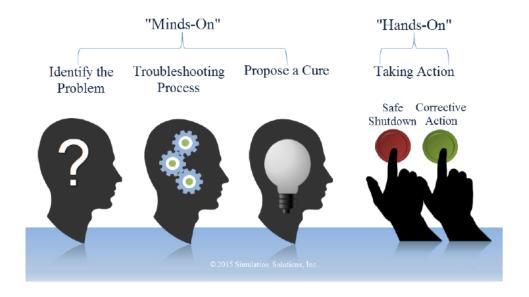
Follow detailed and time critical procedures for start-up and shutdown, starting with a sense of the proper order and important safety issues.

#### Troubleshooting and Upsets:

Learn to approach plant problems/upsets and troubleshoot them in a systematic way. Learn how to implement safe solutions and/or call for an emergency shut-down.

#### Optimization and Operating Strategies:

Learn the safe limits of operation given the current set of equipment, controls, feedstock, etc. in order to maximize productivity/profits.

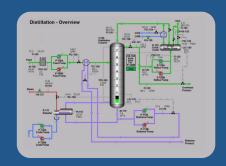


Troubleshooting Strategy

#### SIMULATOR SOFTWARE AND COURSE MATERIAL

#### 1. Process Simulators

Each trainee will be provided with their own simulator modules for the duration of the course. Simulators are brought by instructors for on-site courses and installed ahead of time on trainee PC for virtual courses.





#### 2. Course Exercise Booklets

Every trainee will be provided with their own comprehensive Course Exercise Booklet (CEB) specifically made for each course. These exercise booklets include the complete INSTO™ methodology for each module. Trainees will write in their booklets, and are encouraged to keep them.

#### 3. Flip Charts

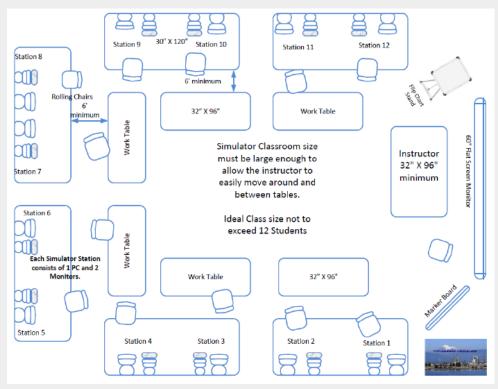
Trainees share their answers on a flip chart in the front of the class to encourage group discussion and an active learning environment. Virtual "polling" is used for virtual course.

#### 4. Operator Self-Assessment Forms

After completing the course, trainees complete a 30 item self-assessment on various operator competencies. Assessments allow operators and supervisors to identify strengths and weaknesses including a comparison to an industry average.

#### COURSE FEES, COMPUTERS AND FACILITIES

- Course fees available upon request.
- Class size: 12 14 Trainees.
- Simulator software is provided for duration of class.
- Courses can also be conducted on-site as well as virtually.
   For on-site courses a recommended room set-up is included below.
- Regardless of format, each trainee must have access to a computer or laptop with a dual monitor setup.



Suggested Room Layout for on-site Course







