Course Details:

<table>
<tr><td>Code</td><td colspan="2">FSE 100</td></tr>
<tr><td>Title</td><td colspan="2">IEC 61511 Functional Safety Analysis, Design, and Operation</td></tr>
<tr><td>Abstract</td><td colspan="2">This course provides an overview of process industry safety engineering from the point of view of the Risk Analyst, Process Safety Coordinator, and Control Systems Design Engineer.
It delivers a complete overview of the functional safety lifecycle. The course reviews Process Hazard Analysis, Consequence Analysis, Layer of Protection Analysis (LOPA), Safety Integrity Level (SIL) Target Selection, Safety Requirements Specification generation, failure rates, device and system reliability, SIF verification, SIF detailed design and Operations requirements.
The FSE 100 course forms a broad review in preparation for the Certified Functional Safety Expert (CFSE) and Certified Functional Safety Professional (CFSP) process industry application engineering exams.</td></tr>
<tr><td></td><td>Course Topics FSE 101</td><td>Course Topics FSE 102</td></tr>
<tr><td></td><td>• Introduction to Safety Instrumented Systems
• Principles of Risk Management
• The Safety Lifecycle
• Process Hazard Analysis
• Consequence Analysis
• Likelihood Analysis
• Layer of Protection Analysis
• Tolerable Risk
• SIL Target Selection
• Safety Requirements Specification</td><td>• Safety Instrumented Systems Failure
• From Failure Rate to SIL
• Single Devices to System
• Redundant Architectures
• Requirements to SIF
• SIF Design and Verification in the Safety Lifecycle
• SIF Detail Design
• Operations</td></tr>
<tr><td>Course Format</td><td colspan="2">☒ Presentation with Exercises/Quiz</td></tr>
<tr><td>Training Material Provided</td><td colspan="2">Handouts of slides, Exercises, Exercise Answers (bound like a tool manual)</td></tr>
<tr><td>Certificate</td><td colspan="2">Certificate of Attendance or
Functional Safety Practitioner (FSP) Certificate on clearing a One-Hour open book exam at the end of the training course</td></tr>
<tr><td>Trainer</td><td colspan="2">Sudhir Pai</td></tr>
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