DNV SA-01 Phast Training

COURSE CONTENT

GET IN TOUCH

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

The DNV SA-01 PHAST Training by Multisoft Systems is a comprehensive program designed to help professionals develop expertise in process safety, consequence modeling, and risk assessment using PHAST (Process Hazard Analysis Software Tool). Widely used across oil & gas, petrochemical, chemical, and energy industries, PHAST supports organizations in evaluating potential hazards such as fires, explosions, toxic releases, and flammable dispersion scenarios. This training provides in-depth knowledge of hazard identification, scenario development, and quantitative risk assessment (QRA) methodologies.

Module 1: Introduction to Process Safety & Consequence Modeling

- ✓ Fundamentals of process safety management
- ✓ Overview of hazard identification techniques (HAZID, HAZOP, What-If)
- ✓ Introduction to consequence modeling and QRA concepts
- ✓ Industry applications of PHAST
- ✓ Overview of PHAST developed by DNV

Module 2: PHAST Software Overview & Interface

- ✓ Installation and system requirements
- ✓ PHAST user interface and navigation
- ✓ Project setup and configuration
- ✓ Database and material selection
- ✓ Units, standards, and modeling options

Module 3: Source Term & Release Modeling

- ✓ Types of releases: gas, liquid, two-phase
- ✓ Leak size and inventory calculations
- ✓ Vessel, pipe, and storage tank modeling
- ✓ Time-dependent vs instantaneous releases
- ✓ Pool formation and evaporation modeling

Module 4: Dispersion Modeling

- ✓ Flammable gas dispersion
- ✓ Toxic dispersion analysis
- ✓ Heavy gas vs light gas behavior
- ✓ Meteorological data input (wind speed, stability class, temperature)
- ✓ Interpretation of concentration contours

Module 5: Fire Modeling

- ✓ Jet fire modeling
- ✓ Pool fire analysis
- ✓ Fireball scenarios
- ✓ Radiation intensity calculations
- ✓ Thermal dose and injury criteria

Module 6: Explosion Modeling

- ✓ Vapor Cloud Explosion (VCE)
- ✓ Overpressure calculations
- ✓ TNT equivalency method
- ✓ Congestion and confinement effects
- ✓ Damage distance and effect modeling

Module 7: Risk Assessment & Analysis

- ✓ Integration with Quantitative Risk Assessment (QRA)
- ✓ Individual and societal risk concepts
- ✓ Vulnerability and fatality estimation
- ✓ Risk contour generation
- ✓ Scenario comparison and sensitivity analysis

Module 8: Reporting & Result Interpretation

- ✓ Output visualization and contour mapping
- ✓ Exporting reports and charts
- ✓ Data validation and model verification
- ✓ Preparing safety study documentation
- ✓ Best practices for regulatory submissions

Module 9: Advanced Applications & Case Studies

- ✓ Multi-scenario modeling
- ✓ Complex industrial layouts
- ✓ Integration with safety management systems
- ✓ Real-world oil & gas and chemical plant case studies
- ✓ Troubleshooting and modeling tips