

exida Can Show you the Way



Training Course: Hazard & Risk Analysis

Process Hazard Analysis is a crucial step in the safety life cycle. During this stage, the potential hazards that a process might pose are identified and assessed. This analysis may lead to increased risk reduction measures such as Safety Instrumented Systems. This course describes the most effective methods for PHA that are employed by the industry. The ability to participate in and lead studies is developed in addition to an appreciation for the documentation that is created in the study how these documents are used in subsequent steps of the safety life cycle is also presented.

Skills You Will Learn:

- ◇ How to build an effective PHA team and provide them with the proper process safety information.
- ◇ How to participate in and lead What-if studies and Checklist Studies.
- ◇ How to perform a failure modes and effects analysis of a process.
- ◇ How to lead and participate in a HAZOP study.
- ◇ How to review BMS Logic and P&ID's
- ◇ How to identify safety instrumented functions in PHA documentation.

Course Topics:

- ◇ Process Hazard Analysis Requirements,
- ◇ PHA Teams,
- ◇ Process Safety Information,
- ◇ What-If Studies,
- ◇ What-If Study Example,
- ◇ Checklist Study Example,
- ◇ Failure modes and Effects Analysis,
- ◇ FMEA Example.
- ◇ Hazards and Operability Study,
- ◇ HAZOP Guidewords,
- ◇ HAZOP Example 1,
- ◇ Human Factors,
- ◇ Discussion Facilitation,
- ◇ Additional Guide Words.
- ◇ HAZOP Example 2,
- ◇ Identifying SafetyInstrumented Functions in PHA Reports.

Who Should Attend:

- ◇ Control Engineers
- ◇ Safety Engineers
- ◇ Risk Anaysts

Length: 2 Days **Cost:** TBD

COURSE MATERIALS PROVIDED

Learning from the Experts



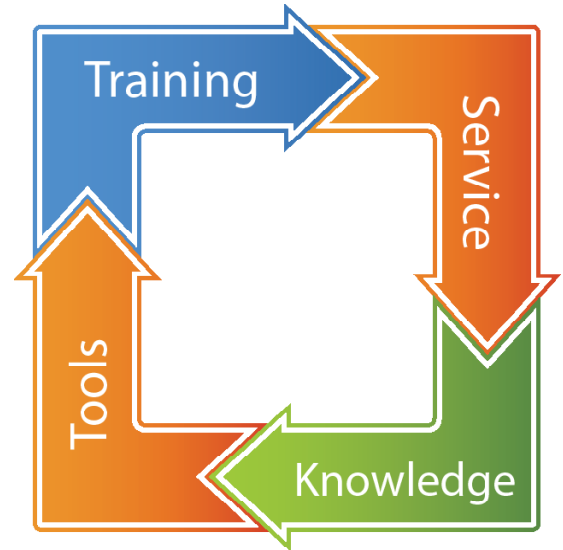
Experience has shown that most companies benefit from training as the first step in implementing a safety program. Having a solid up-front understanding of the Safety Life Cycle, the related standards and requirements for compliance, and the equipment selection and certification options ensures a focused and cost-effective safety initiative. And when you rely on exida for this knowledge, you gain access to some of the world's top experts in functional safety.

exida employees have written the books used for evaluating automation safety and reliability, they helped write the standards used for designing safe and secure systems, and they wrote many of the procedures used to certify the effectiveness of system hardware. They give the lectures and symposia that train industry's top professionals and present the latest developments. And since exida instructors are active safety professionals who participate in standards committees and provide professional safety services, the training reflects the most current and pressing issues.

exida delivers your training flexibly to accommodate your time and budget. Options include training courses delivered at your location, at an exida office, and through computer-based training modules. Example course topics include:

- The IEC 61508 and IEC 61511 Standards
- Hazard and Risk Analysis
- Safety Integrity Level (SIL) Selection
- Functional Safety Life Cycle Management
- CSFE (Certified Functional Safety Expert) preparation

exida also regularly publishes white papers and text books to facilitate learning on key topics, such as the best-selling book Safety Instrumented System Verification and the recently published book Final Elements and the IEC 61508 and 61511 Standards.



Main Offices:

<p>Germany</p> <p>exida.com GmbH Birkensteinstr. 53 83730 Fischbachau PHONE: +49-89-49000547</p>	<p>USA</p> <p>exida.com LLC 64 North Main Street Sellersville, PA 18960 PHONE: +1-215-453-1720</p>
<p>South Africa</p> <p>exida South Africa PTY LTD Suite 1003, 34 Essex Terrace Westville, 3629, KZN PHONE: +27 31 2671564</p>	<p>Switzerland</p> <p>exida Certification SA Chemin de Champ-Poury 2 1272 Genolier PHONE: +41 22 364 14 34</p>
<p>Canada</p> <p>exida Canada Ltd. 2nd Floor 3003 - 23rd Street NE Calgary, Alberta T2E 7A4 Canada PHONE: +1-403-475-1943</p>	<p>Mexico</p> <p>exida Consulting Mexico Giorgione No. 6 Col. Nonoalco Mixocac Mexico, D.F. 03700 Mexico PHONE: 52-55-5-6-11-98-58</p>

www.exida.com