



# 2012 Process Safety, Risk Assessment and Security Training Course Catalog

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## About AcuTech Training Institute (ATI)

AcuTech Training Institute (ATI) provides superior-quality, practical training courses, seminars, and workshops on process safety, chemical security and risk management. We are dedicated to providing a high-value solution for your training needs.

Our expert instructors:

- Give you the skills and knowledge needed to manage process risks
- Help you comply with regulations
- Show you how to continuously improve the safety of your operations

We accomplish this by providing you a strong working knowledge and a clear presentation of safety management principles and regulatory requirements.

### Key Benefits From ATI Courses:

- Receive training from experts who have taught hundreds of process safety and risk management professionals and who are noted for their training effectiveness
- Gain hands-on experience through interactive workshops
- Learn from real-world case studies as shared by our course instructors; their backgrounds in government and industry provide a practical and complete perspective to your training session
- Gain insight into expectations of regulators who also attend our courses; Federal regulatory agencies such as US Environmental Protection Agency (US EPA), Occupational Safety and Health Administration (OSHA), US Coast Guard, Department of Homeland Security (DHS) and state regulators in California, New Jersey, and Nevada have received their training from AcuTech

## Custom On-Site Training

AcuTech also provides customized training for your facility. Any course offering can be presented at your site. Specific workshop examples related to your facility can also be incorporated. Benefits to onsite courses include:

- **Custom Focus for Enhanced Value** - Courses are designed to address unique requirements of your personnel, utilizing their time efficiently and your money effectively.
- **Limit travel expenses** - By bringing our experts to you, you realize significant savings in travel expenses and time lost.
- **Minimal impact to work schedules** - Your personnel are trained at your facility, minimizing their time off-site and the possible need to bring in additional shift coverage

## Webinars & On-Line Training

Throughout the year AcuTech offers webinars on a variety of topics. We often partner with trade associations or other groups to provide webinar content for a topic of their choice. Past topics have included Chemical NEP Preparation and Chemical Facility Anti-Terrorism Standards (CFATS). Contact us at [ati@acutech-consulting.com](mailto:ati@acutech-consulting.com) if you would like to arrange a webinar for your group or if you would like to add your name to our mailing list for training to receive announcements of future webinars.

AcuTech is expanding our offerings to add on-line training programs. Watch our website and your email to learn more about these new offerings.

## API University Courses

AcuTech Consulting Group and the trainers of AcuTech Training Institute teach the American Petroleum Institute's (API's) security training courses: "Workshop on Industry Security Vulnerability Assessments (SVAs)" and "Workshop on USCG Regulations for Facility Security Officers (FSOs)".



## 2012 Schedule

March 14-15  
Philadelphia, PA

March 28-29  
Houston, TX

April 11-12  
San Francisco, CA

August 22-23  
Philadelphia, PA

September 26-27  
Houston, TX

October 10-11  
San Francisco, CA

**Course Tuition: \$995**

**Course Length: 2 Days**

**Accreditation: 1.4 CEUs**

# Best Practices in Process Safety Management

## Course Description

This course provides a thorough overview of Process Safety Management principles including leading issues such as inherent safety, risk based safety, Chemical and Refinery NEP, reactive chemistry, and dust hazards. Participants receive an understanding of the process safety elements regulated by OSHA and EPA, as well as those programs from leading organizations, such as AIChE and API. Topics covered include Mechanical Integrity, Operating Procedures, Process Hazard Analysis, Management of Change, and more. The course includes background, requirements, interpretations, clarifications and implementation examples for PSM elements. Workshops and exercises provide practical examples of how to develop specific programs and procedures.

Participants will develop the knowledge to develop and implement such programs at their own facilities. Attendance will benefit environmental and safety professionals, operations and maintenance managers/supervisors, and RMP coordinators. Past attendees have cited the opportunity to interact with other companies and share information as one of the most valuable parts of the course.

***“Clear, Insightful, Experienced.”***

***Luisito V. Poblete,  
Total Petroleum Corp***

## Course Benefits:

- Acquire the knowledge to plan and develop PSM programs that meet the requirements of regulators. Many regulatory agencies choose AcuTech to teach their staff.
- Learn the latest methods for updating and improving existing programs to achieve real gains in performance.
- Learn the principles behind of each of the elements of process safety.
- Practical examples on how to develop specific programs and procedures.
- Introduction to PSM Metrics, Process Safety Culture, Safety Instrumented Systems
- AcuTech certification of participation.



## 2012 Schedule

March 16  
Philadelphia, PA

March 30  
Houston, TX

April 13  
San Francisco, CA

August 24  
Philadelphia, PA

September 28  
Houston, TX

October 12  
San Francisco, CA

**Course Tuition: \$595**

**Course Length: 1 Day**

**Accreditation: .7 CEUs**

# Auditing for Process Safety and Risk Management

## Course Description

Learn the fundamental skills, techniques and tools of auditing and how to apply to your facility's Process Safety Management (PSM) and Risk Management Program (RMP) audits. Whether your company is large or small, whether you are experienced with auditing or just developing a system, consistent use of the techniques presented can significantly improve your audit and your process safety management. Attendees will learn how to perform a compliance audit, proper documentation of findings and recommendations, and reporting. The course includes the characteristics of a good process safety management system to provide auditors with a benchmark for audits.

AcuTech was the contractor selected to write the revision of the Center for Chemical Process Safety's *Guidelines for Auditing Process Safety Management Systems* in 2010-2011 and the course is based on the revised text. The new Auditing Guidelines book, which is a significant revision of the 1993 first edition, follows the CCPS Guidelines for Risk Based Process Safety list of PSM program elements. It also contains guidance for auditing voluntary consensus programs in process safety, such as Safety and Environmental Management Programs (SEMP), ACC's RCMS program, RC-14001, and others.

Prerequisite: Completion of ***Best Practices in Process Safety Management*** or in-depth understanding of PSM and RMP program requirements.

## Course Benefits:

- Learn how to set audit scope and frequency
- Learn reporting and follow-up policies
- Learn proper staffing for an audit
- Learn fundamentals of preparing for, conducting and closing out an audit
- Topics include:
  - developing audit protocols,
  - how to gather data,
  - interviewing techniques,
  - sampling strategies, and
  - quality assurance
- AcuTech certification of participation



## 2012 Schedule

April 18-20  
Houston, TX

May 16-18  
Philadelphia, PA

June 6-8  
San Francisco, CA

September 12-14  
Houston, TX

October 17-19  
Philadelphia, PA

November 7-9  
San Francisco, CA

**Course Tuition: \$1495**

**Course Length: 3 Days**

**Accreditation: 2.1 CEUs**

# Process Safety Hazard Analysis for Team Leaders

## Course Description

Process Hazard Analysis (PHA) for Team Leaders is intended to educate and train process industry personnel on the proper approach to conducting PHAs as well as provide guidance and tools to aid in leading PHA studies. The course focuses on use of the Hazard and Operability (HAZOP) technique, and training of participants to lead, document and manage HAZOP studies and subsequent recommendations. It provides industry personnel with technical and facilitation skills required to successfully plan and execute a HAZOP study as well as guidance and tools to aid in leading HAZOP studies. Revalidation of HAZOP studies is also covered.

HAZOP is widely recognized as the most comprehensive technique. The technique is recognized as a most effective method of checking processes. It is also found to provide significant improvements in operability by optimizing operator interactions with the process and reducing the risk of human error.

The class format is highly interactive with lecture, group discussions, and workshops. Participants will gain hands-on experience through interactive workshops using PHAPro™. This course is ideal for companies interested in developing in-house HAZOP leadership skills.

***“Good interaction with participants, excellent examples of past experience.”***

- ***Muhd Hasnul Arifin, TNB Generation Sdn Bhd***

## Course Benefits:

- Acquire the knowledge necessary to prepare for, lead, generate reports for, and follow-up on HAZOP studies.
- Learn key aspects of PHA necessary for compliance.
- Build on your team leadership skills enabling you to be qualified to lead HAZOP teams
- Discover means to achieve the optimum use of team time.
- Develop revalidation methods that your company can use to improve PHA quality.
- Learn about PHAPro™, the best selling PHA software designed to save you time.
- AcuTech certification of team leaders to demonstrate evidence of competency.



## 2012 Schedule

April 25-26  
Houston, TX

May 23-24  
Philadelphia, PA

June 13-14  
San Francisco, CA

September 19-20  
Houston, TX

October 23-24  
Philadelphia, PA

November 14-15

**Course Tuition: \$995**

**Course Length: 2 Days**

**Accreditation: 1.4 CEUs**

# LOPA: Layer of Protection Analysis

## Course Description

Layer of protection analysis (LOPA) is a simplified method of risk assessment that provides the much-needed middle ground between a qualitative process hazard analysis (such as a HAZOP or What-If) and a traditional, expensive quantitative risk analysis. Beginning with an identified accident scenario, LOPA uses simplifying rules to evaluate initiating event frequency, independent layers of protection, and consequences to provide an order-of-magnitude estimate of risk. LOPA has also proven an excellent approach for determining the safety integrity level necessary for an instrumented safety system, an approach endorsed in instrument standards, such as ISA S84 and IEC 61511.

This 2-day training class provides complete instruction on how to lead a LOPA study, and how to integrate LOPAs with PHAs. The course includes the main topics from the Center for Chemical Process Safety (CCPS) concept book on Layers of Protection Analysis.

## Course Benefits:

- Learn how and when to use LOPA
- How to develop scenarios from a qualitative hazard study (ie. HAZOP) or from a new process/changes to a process
- How to estimate the frequency category for the initiating event of a scenario
- How to determine the consequence category for the unmitigated scenario
- Understand how to determine which protection layers meet the criteria of independence and uniqueness as independent protection layers (IPLs)
- How to determine the risk of a LOPA scenario and how to determine if further risk reduction is warranted
- Learn industry best practices for LOPA



## 2012 Schedule

March 23  
Houston, TX

May 11  
McLean, VA

June 22  
San Francisco, CA

September 7  
Houston, TX

October 19  
McLean, VA

November 24  
Philadelphia, PA

**Course Tuition: \$595**

**Course Length: 1 Day**

**Accreditation: 0.7 CEUs**

# Auditing Facility Security for MTSA & CFATS Compliance

## Course Description

This one day program provides the skills needed to conduct audits as required under the Marine Transportation Safety Act (MTSA) and the Chemical Facility Anti-Terrorism Standard (CFATS). Both programs include government-based inspections/audits and require facilities to conduct periodic internal compliance audits against security plans for the covered facility. Course topics include a review of the audit requirements of the regulations as well as the fundamental approach, skills, techniques and tools of auditing and how to apply to your facility's compliance audits for security. Attendees will learn how to perform a compliance audit, proper documentation of findings and recommendations, and reporting.

## Course Benefits:

- Review of the current MTSA and CFATS regulations and audit requirements
- Learn fundamentals of preparing for, conducting and closing out an audit
- Learn how to set audit scope and frequency
- Learn the importance of utilizing a documented audit procedure
- Learn how to address and document repeat findings
- Learn reporting and follow-up practices and procedures
- Learn proper staffing for an audit
- Learn how to resolve audit dilemmas
- Guidelines for auditing facility security plans
- Benefits of incorporating lessons learned from government inspections/audits
- AcuTech certification of participation

## Who Should Attend

- Facility Security Officers and Assistant Facility Security Officers
- Security Supervisors

Note: We recommend attendees from MTSA facilities have received FSO training and attendees from CFATS sites hold CVI certificates.

## On-Site Training

In addition to our scheduled courses, AcuTech provides custom on-site training on process safety, risk management and security topics. Any of the scheduled courses can be delivered as an on-site program. It can be customized to your company and facility. For example, the Process Hazards Analysis for Team Leaders course can use your facility's processes as workshop examples and your corporate PHA guidelines can be incorporated into the class.

The following are popular courses AcuTech has provided to other clients. Please contact us to discuss your training needs and we would be happy to provide a proposal tailored to your requirements.

### PSM Overview

1 Day

.7 CEUs

This one day course provides an overview of the elements of the OSHA Process Safety Management (PSM) standard. Participants receive a basic understanding of the process safety elements regulated by U.S. OSHA and EPA, including background and requirements for each element. The one day format is ideal as both initial and refresher training for larger groups of employees.

### PHA for Team Members

1 Day

.7 CEUs

This course is designed for staff who will participate as team members in process hazard analyses. The emphasis is on understand and applying HAZOP and What-If methodologies. The objective is to improve understanding of the PHA process so that sessions will run more smoothly allowing team leaders to spend less time training team members and more time analyzing processes. A deeper understanding of how to apply the methodology also results in more thorough studies.

### PHA Revalidations/Advanced Topics in PHA

length varies by client

This course is customized to your facility and staff from a variety of advanced topics and workshops. Topics may include: revalidations, project PHAs, PHA/LOPA, PHA/SIL,

### Using PHAPro for PHA Studies

1 Day

.7 CEUs

This is a one day hands-on training to use PHAPro software for documenting PHAs. The workshop includes practical applications of leading a HAZOP, basic use of PHAPro, advanced applications for PHAPro, practical experience leading a team through "real" HAZOP scenarios. The course can be customized to use your site's processes.

### Quantitative Risk Assessment

3 days

2.1 CEUs

Course objectives are to provide participants with a technical and managerial understanding of Quantitative Risk Analysis (QRA). The training focuses on the proper approach to conducting QRAs as well as guidance and tools to aid in leading studies. This 3-day course will provide you with the technical and leadership skills necessary to successfully plan and execute a QRA and is ideal for companies interested in developing some in-house QRA leadership skills.

### Incident Investigation

2 days

1.4 CEUs

This two day Incident Investigation training course to enable attendees to conduct a comprehensive investigation to find root causes of incidents and near misses. The program will include: establishing an investigation management system, investigation priorities, gathering evidence (physical, interviews and documentation), reaching root causes, reporting, recommendations and response. The course also covers responding to major incidents and cooperation with OSHA, EPA, CSB and other investigative organizations.

## On-Site Training (continued)

### Human Factors in Process Safety

2 days

1.4 CEUs

This course provides knowledge necessary to develop and implement a practical and comprehensive program for reducing risk related to human factors in process safety. The course will include methods for analyzing human factors and, in particular, errors in design or operation. Methods and software to systematically analyze human error and human reliability will be reviewed. The intent is to overlay an existing PSM system with a program that emphasizes human factors considerations. This course is intended to develop your knowledge on the principles of human error, human reliability, and human factors in design. Also included is advice to practice methods such as human factors surveys, HAZOP of procedures, and Task Analysis techniques.

### Mechanical Integrity Program Management

2 days

1.4 CEUs

This class focuses on the Mechanical Integrity Program Management. Mechanical integrity is a "condition" or state of a process or equipment which indicates that it is capable of full operations and is operating within the manufacturers' operating tolerances. Specifically, the Mechanical Integrity Program is aimed at ensuring that critical process equipment and components are: designed, fabricated, installed, inspected, tested, maintained, repaired, and decommissioned in a manner which preserves the originally intended integrity of the equipment, and by personnel who are properly trained and qualified to perform the necessary activities. Mechanical integrity activities span the entire life cycle of a covered process.

Course topics include: definition and interpretations of the Mechanical Integrity (MI) element of the PSM Standard, how to develop and implement the policies, practices, and procedures necessary for an effective MI program, and examples of industry best practices in MI programs. The program introduces the concepts of reliability centered maintenance (RCM) and risk-based inspections (RBI) and provides some guidance on how to employ these techniques in designing a MI program.

### Writing Effective Standard Operating Procedures

2 days

1.4 CEUs

This class focuses on how to write effective procedures for operations, maintenance, and skills can be used for mechanical integrity or any other area where clear concise procedures are required.

### Managing NEP Inspections

length varies by client

This course is customized to your facility and staff. AcuTech has provided NEP inspection expertise in webinars for the Center for Chemical Process Safety and other organizations. We can provide a variety of training from a one hour webinar to a more detailed on-site course. Training can include topics from the auditing course as well.

### Security Personnel Training

1 day

.7 CEUs

This course provides basic security training for personnel with security duties. Topics include detecting dangerous substances and devices; recognition of threatening persons; techniques to circumvent security measures; crowd control and management methods; and security-related communications and systems.

### Introduction to Security Countermeasures

1 day

.7 CEUs

This course is designed to provide an overview of personnel-based, procedural and technical security strategies, approaches, as well as systems/equipment that can be used to address access control, intrusion detection, surveillance and adversary delay to provide cost effective protection of company assets and personnel. A portion of the class time will be dedicated to working example cases and/or sanitized attendee presented cases and problems.

## API University Courses

AcuTech Consulting Group and the trainers of AcuTech Training Institute teach the American Petroleum Institute's (API's) security training courses: "Workshop on Industry Security Vulnerability Assessments (SVAs)" and "Workshop on USCG Regulations for Facility Security Officers (FSOs)". The following dates and locations are scheduled for the coming year:

### SVA

March 21-22	Houston, TX
May 9-10	McLean, VA
June 20-21	San Francisco, CA
September 10-11	Houston, TX
October 17-18	McLean, VA

### FSO

March 19-20	Houston, TX
May 7-8	McLean, VA
June 18-19	San Francisco, CA
October 15-16	McLean, VA

To obtain more information about these courses, including registration form, please go to <http://www.acutech-consulting.com/training.php> and click on the API logo.

## Registration Information:

We recommend registering 30 days in advance of the course date. If you are paying by check and it is within 2 weeks of course date, please fax a copy of your registration form so that we may include you in our headcount. **Classes that do not have 8 participants at 21 days prior to the course date may be cancelled so early registration helps all who are planning to attend.**

**Discounts:** 10% discount for the 3rd person and subsequent enrollees from the same company registering at the same time for the same course, or for an individual attending two or more consecutive courses.

**Credit Card Charges and Receipts:** Charges for tuition are not processed until the month the class is held. Receipts are then emailed to the card holder indicated on the registration form. We accept VISA and MasterCard. Tuition can also be paid via company check.

**Substitutions, Cancellations and Refunds:** Notice of cancellations and requests for refunds must be made in writing and received no less than two weeks prior to course date. Registrations cancelled less than two weeks prior to the course date will be issued a transferable course credit that may be applied to any ATI course for the following twelve months. Substitutions may be made at any time by written/email request.

## Course Logistics:

<b>Registration Check-In:</b>	8:00 am
<b>Class Hours:</b>	8:30 am – 5:00 pm daily

Includes coffee and pastries in the morning, afternoon cookies & soft drinks. Lunch is included with all full day ATI courses. Meeting space will be reserved approximately one month prior to the course date. Overnight accommodations are the responsibility of the attendee. All registered attendees will receive a confirming email with meeting space information.

## Further Questions about Registration?

Contact our headquarters at 703-245-3015 or email [ati@acutech-consulting.com](mailto:ati@acutech-consulting.com)

## Registration

Register by mail or secure fax **703-842-8854**. Questions? email [ati@acutech-consulting.com](mailto:ati@acutech-consulting.com)

<b>Name</b>		<b>Title</b>	
<b>Company</b>			
<b>Address</b>			
<b>City, State, Postal Code</b>			
<b>Phone</b>			
<b>Fax</b>			
<b>E-mail</b>			
<b>How did you hear about the courses?</b>		<input type="checkbox"/> AcuTech Web Site <input type="checkbox"/> AcuTech e-mail announcement <input type="checkbox"/> Supervisor / Co-worker <input type="checkbox"/> Other: _____	
<b>Check</b>		<input type="checkbox"/> I enclose a check payable to <b>AcuTech Group, Inc.</b> <b>Mail to: 1600 Tysons Boulevard, Suite 800, McLean, VA 22102</b>	
<b>Credit Card:</b>		Please charge the following credit card and amount: <input type="checkbox"/> Visa <input type="checkbox"/> MasterCard      Amount: \$ _____ USD	
<b>Card Holder Name:</b>			
<b>Card No.:</b>			
<b>Expiration Date:</b>		<b>CVV Code ** :</b>	
<b>Signature:</b>			
<b>Card Billing Zip Code</b>		<b>Card Holder Email (receipt will be emailed)</b>	
<b>X</b>	<b>Tuition</b>	<b>Please register me for the following course(s):</b>	
	\$995	<b>Best Practices in PSM</b> 2 days	<b>Philadelphia, PA</b> <input type="checkbox"/> <b>March 14-15</b> <input type="checkbox"/> <b>August 22-23</b> <b>Houston, TX</b> <input type="checkbox"/> <b>March 28-29</b> <input type="checkbox"/> <b>September 26-27</b> <b>San Francisco, CA</b> <input type="checkbox"/> <b>April 11-12</b> <input type="checkbox"/> <b>October 10-11</b>
	\$595	<b>Auditing for Process Safety and Risk Management</b> New 1 day format	<b>Philadelphia, PA</b> <input type="checkbox"/> <b>March 16</b> <input type="checkbox"/> <b>August 24</b> <b>Houston, TX</b> <input type="checkbox"/> <b>March 30</b> <input type="checkbox"/> <b>September 28</b> <b>San Francisco, CA</b> <input type="checkbox"/> <b>April 13</b> <input type="checkbox"/> <b>October 12</b>
	\$1495	<b>Process Hazard Analysis for Team Leaders</b> 3 days	<b>Houston, TX</b> <input type="checkbox"/> <b>April 18-20</b> <input type="checkbox"/> <b>September 12-14</b> <b>Philadelphia, PA</b> <input type="checkbox"/> <b>May 16-18</b> <input type="checkbox"/> <b>October 17-19</b> <b>San Francisco, CA</b> <input type="checkbox"/> <b>June 6-8</b> <input type="checkbox"/> <b>November 7-9</b>
	\$995	<b>LOPA: Layers of Protection Analysis</b> 2 days	<b>Houston, TX</b> <input type="checkbox"/> <b>March 10-11</b> <input type="checkbox"/> <b>September 22-23</b> <b>Philadelphia, PA</b> <input type="checkbox"/> <b>April 7-8</b> <input type="checkbox"/> <b>November 10-11</b> <b>San Francisco, CA</b> <input type="checkbox"/> <b>May 12-13</b> <input type="checkbox"/> <b>October 20-21</b>
	\$595	<b>Auditing Facility Security for MTSA &amp; CFATS</b> 1 day	<b>Houston, TX</b> <input type="checkbox"/> <b>March 23</b> <input type="checkbox"/> <b>September 7</b> <b>McLean, VA</b> <input type="checkbox"/> <b>May 11</b> <input type="checkbox"/> <b>October 19</b> <b>San Francisco, CA</b> <input type="checkbox"/> <b>June 22</b> <b>Philadelphia, PA</b> <input type="checkbox"/> <b>October 24</b>

\*\*For Visa and MasterCard cardholders, this is the extra 3 digits on the back of your card. We request this for credit card security purposes only