



ACCIDENT INVESTIGATION:

Cranes, Rigging and Material Handling Operations

Course Preview E-Book



**INDUSTRIAL TRAINING
INTERNATIONAL**

CRANES | RIGGING | LIFT PLANNING | ENGINEERING

iti.com

ACCIDENT INVESTIGATION:

Cranes, Rigging and Material Handling Operations

Course Preview E-Book

Developed and produced by:



INDUSTRIAL TRAINING
INTERNATIONAL

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ABOUT ITI

Who We Are

ITI was founded by people whose driving passion is to help others and be good stewards of their gifts. Our founder became an Eagle Scout at the age of 14 - a rigorous feat that 18-year-old candidates struggle to attain. The tenacity to achieve, work hard, and the desire to help others has formed a company that has continuously exhausted all efforts to lead the world in training skills and providing quality service in order to save the lives and improve the industrial activities of the employers we serve.

WE EXIST TO SERVE AND LEARN EVERY DAY



ITI Training Solutions

- 9 Training Centers in North America
- 14 Full-Time Professional Instructors
- Over 1,200 Hours of Engaging Digital Learning Content
- Virtual Reality (VR) Simulators for Operator Training and Competency Qualification
- Field Consultation from Industry Leading Experts
- The World's Largest Load Handling Resource Center



ABOUT ITI

LEEA

In 2012, ITI underwent a string of audits and evaluations to become an Accredited User Training Company according to the Lifting Equipment Engineers Association. At the time, ITI was the first professional training company in North America to be Accredited by LEEA.



The process entailed:

- 1) A corporate audit of ITI as an organization.
- 2) A complete audit of all ITI course curriculum and examination processes.
- 3) Individual presentation skill audits of all ITI Instructors.
- 4) Facility audit(s) to determine compliance of ITI Training Centers.

The Lifting Equipment Engineers Association (LEEA) is established as the leading representative body for all those involved in the lifting industry worldwide. The Association has played a key role in this specialized field for over half a century, from training and standards setting to health and safety, the provision of technical and legal advice, and the development of examination and licensing systems.

ITI Customers

We are proud to serve the following industries and leading organizations:

- Aerospace
- Construction
- Defense
- Electric Utility
- Manufacturing
- Maritime
- Mining
- Petrochemical
- Offshore
- Power Generation
- Nuclear
- Renewables
- Pulp & Paper
- Shipbuilding & Repair



ABOUT ITI

ITI Crane & Rigging Resources



ITI WEBINARS

- Live Training Webinars
- View Webinar Recordings
- Request a Custom Webinar



ITI BLOG

- ITI Newsroom
- The Pro Rigger
 - ITI VR
 - ITI Online



E-NEWSLETTER

- Subscribe for Weekly Updates
- View Archived E-Newsletters



STANDARDS LIBRARY

- OSHA
- ASME
- CSA



PARTNERS

- Strategic Partners
- Equipment Suppliers
- Industry Associations



DOWNLOADABLE CONTENT

- E-Books
- Checklists
 - Forms
 - Charts



INFO KITS

- Crane Training
- Rigging Training
- Lift Planning Training
- Rigging Engineering



CASE STUDIES

- ITI Customers
- Training Solutions



SOCIAL

- LinkedIn
- Facebook
- Twitter
- Instagram

Get instance access to all of these tools and more at www.iti.com/resources.

INTRODUCTION AND OBJECTIVES

Introduction

The AI (Accident Investigation) Course begins with a short classroom session that covers the basics of accident investigation, an introduction to root cause analysis, and standards relevant to cranes, rigging and forklifts. Utilizing the theories & techniques discussed in class, the students then participate in a series of workshops that focus on three disciplines related to load handling; crane operations, rigging activities and forklift operations. Problem-solving workshops help solidify participants' understanding and knowledge concerning equipment set-up, proper application, capacity information, inspection, hazard recognition and operational safety.

The Hands-On portion of this unique course contains three accident scenes on the campus of the ITI Woodland, Washington Training Center. Students work in teams to conduct investigations of these scenes using knowledge and tools learned in the course.

Accident scenes include:



Objectives

At the completion of this course, the student will be able to:

- Explain the need for a thorough accident investigation.
- Understand the steps involved in a thorough investigation.
- Effectively conduct three (3) accident investigations
 - Crane Accident
 - Forklift Accident
 - Rigging Accident
- Be able to prepare and present an accident report with Root Cause Analysis and Corrective Actions.

ACCIDENT -VS- INCIDENT

What is an Accident?

The Merriam Webster definition of an accident is:
“An unforeseen and unplanned event or circumstance, or an unfortunate event resulting especially from carelessness or ignorance.”

Accidents are caused predominately by the failure of people, equipment, and/or surroundings to react as expected.

What is an Incident?

The Merriam Webster definition of an incident is:
“An accompanying minor occurrence or condition.”

When compared to an accident, an incident, is not as serious and does not result in a fatality, injury, property damage or loss. An incident may only be considered a near miss, but it is important to remember that it had the potential to become an accident, and therefore, it must be investigated with the same fervor and attention to detail as an accident investigation. This will ensure the “near miss” will not result in a future accident. Incidents are educational opportunities, and we must learn from them.



Why should we investigate an accident?

It is important to remember that investigations are fact finding, **NOT** fault finding. An investigator must remain objective and strictly follow the facts, leaving opinions out of the equation. Information before, during, and after an accident must be collected. Events and information occurring before an accident can explain what happened and why the accident happened.

The primary objective of an accident investigation is to prevent a reoccurrence by determining actual causal factors, based upon facts, and then implementing corrective action plans.

Secondary objectives of an accident investigation many include:

- Determining any Federal, State, or Provincial violations and or fines, e.g., OSHA
- Determine Worker’s Compensation liabilities.
- Determine any legal liabilities.
- Determine any violations of corporate or site-specific purposes.

COURSE OUTLINE

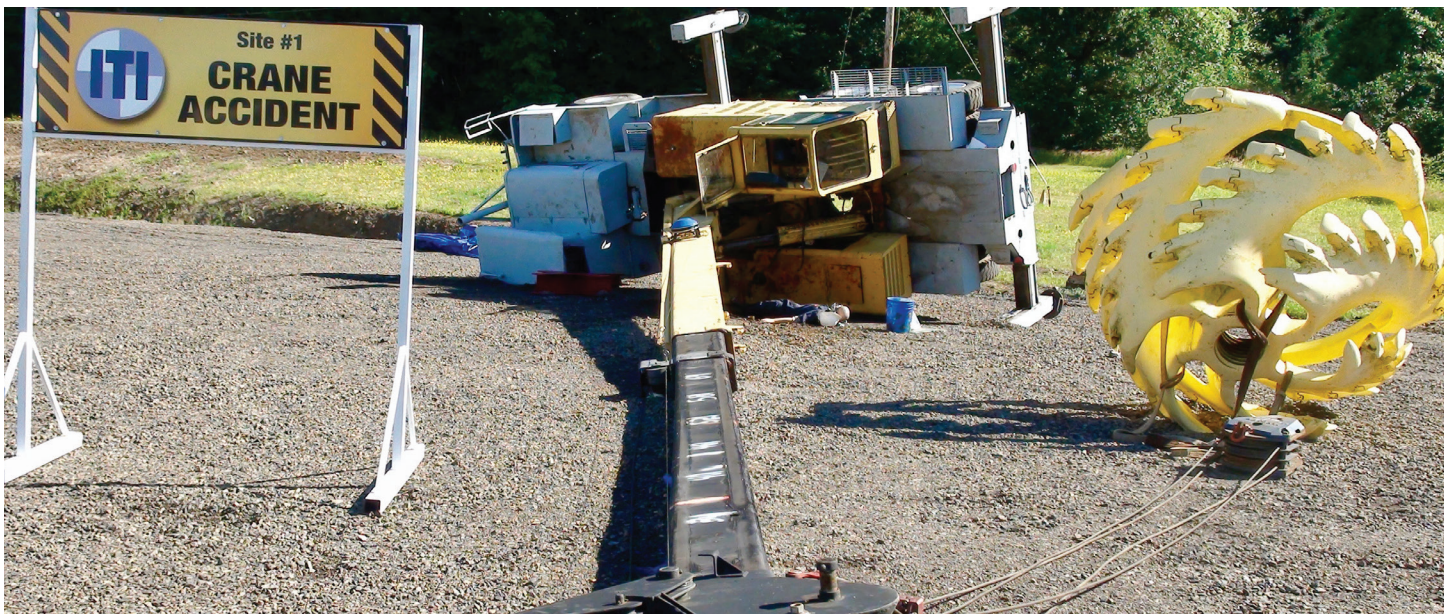
Day 1

- Load Handling Primer
- Crane Operations
- Rigging Activities
- Forklift Operations



Days 2 - 3

- Federal, State/Provincial Regulations & Standards
- Operator/Rigger Assignments & Performance
- Fact vs. Fiction
- Leading Cause Identification
- Violations of Corporate and Jurisdictional Requirements
- Corrective Action Plan
- Hands-On Accident Scene Investigation
 - Mobile Crane Accident
 - Forklift Accident
 - Rigging Accident



ABOUT THE COURSE

Who Should Attend?

Candidates for the Accident Investigation Course cover a wide range of positions and roles. **Safety professionals and employees in supervisory roles** who oversee load handling work, but do not necessarily perform these operations, undoubtedly will benefit from the 3-Day Course. Additionally, lead field and trade personnel such as **millwrights, pipe fitters, and iron workers, maintenance personnel, risk management professionals, and regulatory representatives** are ideal candidates for the accident investigation course.

Where is the Course Offered?

Accident Investigation is offered in an open enrollment format three times each calendar year at the ITI Woodland, Washington Training Center. Open enrollment courses are limited to a maximum of 12 students per session, and are available on a first come, first serve basis. Visit www.iti.com/accident-investigation-training to view upcoming courses.

The course can also be conducted at client locations. These sessions can be tailored to meet specific customer needs, using equipment, space, and tools that are available at the individual location. Request a quote at www.iti.com/quote.

Duration and Price

Accident Investigation is a 3-Day (8:00 AM to 5:00 PM) session consisting of classroom interactive, problem solving workshops, and hands-on training when conducted at ITI Training Centers. Sessions conducted at client locations can vary depending on the number of students, exams requested, and other customized content.

Open enrollment ITI Training Center Sessions carry a course fee of \$1,995 per student, limit 12 students per course. Each student that completes the full 3-Day course receives 2.4 Continuing Education Units (CEUs) as well as a certificate of completion.





ACCIDENT INVESTIGATION WORKSHEET

INVESTIGATOR INFORMATION

Investigator's Name: _____
Office Address: _____
Office Phone #: _____ Mobile Phone #: _____
FAX #: _____ Email Address: _____

CLIENT INFORMATION

Company's Name: _____
Client's Address: _____
Office Phone #: _____ FAX #: _____
Point of Contact (1) Name: _____
Mobile Phone #: _____ Email Address: _____
Point of Contact (2) Name: _____
Mobile Phone #: _____ Email Address: _____
Point of Contact (3) Name: _____
Mobile Phone #: _____ Email Address: _____

INCIDENT INFORMATION

Date of Incident: _____ Time of Incident: _____
Address of Incident: _____

Brief Description of Incident:

Incident Investigation Reminders

1. Notify the Safety Department
 - a. **Title – Name – Phone No.**
2. Call 911 if the situation warrants
3. Transport and accompany injured employee(s) to the appropriate medical facilities
4. Secure the Scene
 - a. **Be sure that any life threatening situations are under control and that any non-essential personnel removed from the scene**
 - b. **Leave everything as it was when the incident occurred until pictures are taken of the scene**
 - c. **Mark off the area and limit access**
 - d. **If emergency response teams moved items/objects, record what was moved and why it was moved. Be as specific as possible.**
5. Gather Information
 - a. **Gather any and all witnesses for statements**
 - I. **Separate witnesses and collect witness statements**
 1. **If translators are used, they must also sign the witness statements**
 2. **Instruct the translators to write verbatim what the witness says, not their interpretation or opinion of what was stated.**
 - II. **Retrieve statements as close to the time of the incident as possible for the most accurate information**
 - III. **Ask leading questions**
 - iv. **Do NOT "pass judgment" on the witness's comments. What appears unimportant now may be critical later.**
 - b. **Take pictures of the incident scene**
 - I. **Begin by taking the widest possible photo of the incident scene**
 - II. **As you approach the specific location of the incident, narrow the frame of your photos**
 - III. **Take as many photos as possible to ensure that you have captured all relevant important facts to "tell the story"**
6. Give copies of all documents, statements and photos to EHS Dept. and to the Incident Investigation Committee.

FORM	Instructions
Refusal of Medical Treatment	Employee signs form if they do not want to go and receive ANY medical treatment (even at our own Wellness Center)
Employee Notice; Physician's Panel (2 forms – one for the file and one for the employee)	The employee is to select a physician from the panel, circle and initial the selection and sign the form whether they go to the clinic or not. Provide a copy to the employee
Injured Worker's Notification Form	Must be completed and sent with the employee to the medical provider for the initial visit.
Employee Injury Report	To be completed by employee within 12 hours of incident
Supervisor Injury Report	To be completed by supervisor of injured employee within 12 hours of incident
Medical Treatment Report	Give to the employee so that the medical professional can complete the form. This is to be provided for every visit, even follow-ups. The supervisor is to sign the "Treatment Authorized By" line.

Investigation Tools and Materials Checklist

<input type="checkbox"/> 1. Backpack
<input type="checkbox"/> 2. Chain Gauge
<input type="checkbox"/> 3. Incident Scene Ruler
<input type="checkbox"/> 4. Index Cards
<input type="checkbox"/> 5. Incident Investigation Reminders & Tools and Materials Checklist
<input type="checkbox"/> 6. Microscope
<input type="checkbox"/> 7. Rubber Gloves
<input type="checkbox"/> 8. Sharpie Pen
<input type="checkbox"/> 9. Sheave Gauge
<input type="checkbox"/> 10. Tape Measure
<input type="checkbox"/> 11. Digital Calipers
<input type="checkbox"/> 12. Clipboard
<input type="checkbox"/> 13. Marlin Spike
<input type="checkbox"/> 14. Magnetic Angle Indicator
<input type="checkbox"/> 15. Leatherman Multi-Tool

Other Tools

<input type="checkbox"/> A.
<input type="checkbox"/> B.
<input type="checkbox"/> C.
<input type="checkbox"/> D.
<input type="checkbox"/> E.
<input type="checkbox"/> F.
<input type="checkbox"/> G.
<input type="checkbox"/> H.
<input type="checkbox"/> I.
<input type="checkbox"/> J.
<input type="checkbox"/> K.
<input type="checkbox"/> L.
<input type="checkbox"/> M.
<input type="checkbox"/> N.
<input type="checkbox"/> O.

TRAINING CENTERS

NORTH AMERICA

Woodland, WA
iti.com/woodland



Houston, TX
iti.com/houston



Cleveland, OH
iti.com/cleveland



Memphis, TN
iti.com/memphis



Edmonton, AB
iti.com/edmonton



New Orleans, LA
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