



Certified Risk Analysis & Assessment Manager Professional

Credential: CRAAM

Course Length: 64 Hours.

Course Fee: \$1,495.00

Course Overview:

This 64-hour course provides an in-depth examination of risk management principles within safety and health management. Participants will explore strategies and tactics to reduce workplace hazards, leveraging best practices, analytical tools, and risk-reduction methods. The course emphasizes practical applications and theoretical foundations, ensuring learners can effectively integrate risk management practices into organizational safety programs.

Course Outcomes:

By the end of this course, participants will be able to:

1. Explain risk management concepts related to safety management and accident prevention.
2. Evaluate analytical tools that assess workplace hazards and risks.
3. Integrate occupational safety and health programs into the total risk management process.
4. Discuss how individual perception of risk contributes to risk-taking behavior.
5. Create a workplace assessment for hazards and risks.

6. Apply risk-reduction strategies to reduce workplace hazards.
7. Determine the acceptability of residual risks after risk-reduction tactics are applied.

Course Outline:

Module 1: Introduction to Risk Management Principles (8 hours)

- Definition of Risk and Risk Management
- Types of Risks: Speculative vs. Pure Risk
- Key Concepts: Hazard, Risk, and Exposure
- Risk Management Models (ISO 31000, ANSI Z690)

Learning Activities:

- Lecture
- Case Study Analysis
- Group Discussion

Module 2: Safety Management and Accident Prevention (12 hours)

- The Role of Risk Management in Safety Programs
- Accident Causation Models
- Regulatory Requirements (OSHA, EPA, ISO Standards)
- Risk Identification Methods (JHA, HAZOP, FMEA)

Learning Activities:

- Hands-on Exercises
- Small Group Work
- Quiz

Module 3: Analytical Tools for Assessing Risks (10 hours)

- Risk Matrix and Risk Scoring Systems
- Bowtie Analysis
- Fault Tree Analysis (FTA)
- Event Tree Analysis (ETA)

Learning Activities:

- Software Demonstrations
- Practical Exercises

Module 4: Risk Perception and Behavior (8 hours)

- Human Factors and Risk Perception
- Behavioral Safety Programs
- Risk Communication Strategies
- Case Studies: Risk-Taking Behavior

Learning Activities:

- Role-Playing Exercises
- Discussion Forums

Module 5: Workplace Hazard Assessment (10 hours)

- Conducting Hazard Assessments
- Hazard Identification and Control
- Risk Prioritization Techniques
- Developing Hazard Assessment Reports

Learning Activities:

- Field Exercise
- Written Report

Module 6: Risk Reduction Strategies (10 hours)

- Hierarchy of Controls (Elimination, Substitution, Engineering Controls, Administrative Controls, PPE)
- Best Practices in Risk Reduction
- Cost-benefit analysis in Risk Reduction
- Monitoring and Reviewing Controls

Learning Activities:

- Group Project
- Case Study Analysis

Module 7: Evaluating Residual Risks (6 hours)

- Residual Risk Concepts
- Determining Acceptable Levels of Risk
- Continuous Improvement in Risk Management
- Reporting and Documenting Risks

Learning Activities:

- Final Project
- Course Review

Assessment and Evaluation:

- Quizzes: 20%
- Hazard Assessment Report: 20%
- Group Project: 25%
- Final Exam: 35%

Sample Test Questions:

Multiple Choice Questions:

1. Which of the following is a key principle of risk management?
 - A. Risk elimination
 - B. Risk avoidance
 - C. Risk identification and control
 - D. Risk escalation

Answer: C

2. In the context of workplace safety, residual risk refers to:
 - A. Risks that are completely eliminated
 - B. Risks that remain after control measures are applied
 - C. New risks introduced by control measures
 - D. Risks that are speculative in nature

Answer: B

3. Which tool is used to identify potential failure points in a system?
 - A. Bowtie Analysis
 - B. Fault Tree Analysis
 - C. Risk Matrix
 - D. Event Tree Analysis

Answer: B

True/False Questions:

4. Risk perception does not impact an individual's workplace behavior.

Answer: False

5. A risk matrix prioritizes risks based on their likelihood and severity.

Answer: True

Short Answer Questions:

6. Explain how the hierarchy of controls can be used to reduce workplace hazards.

Participants will conduct a comprehensive workplace risk assessment, identifying hazards, evaluating risks, and proposing risk-reduction strategies. The project will require a written report and a presentation to the class.

Required Texts and Resources:

- Guidelines for Risk-Based Process Safety 1st Edition
- ISO 31000: Risk Management Guidelines
- OSHA Standards (29 CFR 1910 and 1926)
- ANSI/ASSE Z690 Series

Course Prerequisites:

There are no prerequisites for this course.

This course will be valuable for:

- Safety Professionals,
- Safety & Health Committee Members
- Industrial Hygienist
- Environmental Professionals
- Human Resource Professionals
- Managers & Supervisors,

- Others with responsibility or interest in controlling risk in their workplace.

Certification Exam

At the end of 64 hours of study, participants will take an exam to assess their understanding of the course material required to become a Certified Risk Analysis & Assessment Manager Professional.

Course Prerequisites:

- Three (3) years of demonstrated experience as a Construction Safety & Health professional or similar role, such as but not limited to a construction manager, supervisor, lead, union leader, or union safety representative where at least 25% of your work responsibilities are covered working in this field.
- Excellent knowledge of legislation and procedures
- Excellent knowledge of potentially hazardous materials or practices
- Three (3) years of experience in producing reports in construction-related safety & health issues
- Experience with writing policies or writing job-specific Job Safety Analysis (JSA), or Job Task Analysis (JTA), or work procedures where employee safety and health were part of the procedures
- Familiarity with conducting data analysis and reporting statistics
- Documented GED / Apprentice Certificate Completion / On-The-Job / Skills Training / or AA / BSc / BA in safety management or similar field
- Certificate in occupational health and safety from OSHA or an Authorized OSHA Training Institute Education Center (OTIEC), NEBOSH, National Safety Institute or similar training organizations. Note: Training certificates from the National Association of Safety Professionals (NASP) or the International Association of Safety Professionals (IASP) will not be accepted.
- Pass a four (4) hour - Two Hundred & Fifty (250) questions, proctored examination, and pass at an 80%. You are allowed three attempts to pass this examination. Should you not pass this examination after

three attempts, you may retake this course.

Recertification:

A refresher examination is required every three (3) years to maintain certification. The cost for recertification is \$195.00

For more information or to register for this course, please visit www.iashep.org and complete the course enrollment form. If you have any questions, please contact the IASHEP Training Administrator at (612 - 801-1032).

