Fundamentals + Advanced Human Factors & Error Management for Safety Critical Industries

ONLINE COURSE | 11 Self-Paced Modules Over 11 Weeks

Mastering Human Factors: Advanced Strategies for Error Management in Safety Critical Industries.

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Informa Connect
Academy

Course Overview

"Error is pervasive. The unexpected is pervasive. What is not pervasive are well-developed skills to detect and contain these errors at their early stages".
Karl Weick, Managing the Unexpected

Regardless of industry type or sector, accident statistics appear to be dominated by the contribution of human error. This is hardly surprising since humans are involved in the design, construction, maintenance, operation and management of complex socio-technical systems across any safety critical industry such as transport, mining, construction, oil and gas, power and water utilities, essential and emergency services and healthcare service delivery.

While human error is a normal part of our human makeup, the consequences of errors in any industry can be disastrous and the subject of public outrage, exhaustive inquiries and drawn-out legal action.

The cost of human error in the workplace is also considerable:

- BP estimated that the Deepwater Horizon oil spill resulted in costs that exceeded USD $40 billion.
- According to the International Air Transport Association (IATA), airports have estimated that ramp accidents cost over USD $10 billion each year.
- The Flight Safety Foundation reports that over 38,000 commercial aircraft land in an unstable condition every year, causing potential maintenance and inspection delays.
- In healthcare, the direct medical costs of preventable clinical incidents arising from human error have been estimated at $2 billion each year in Australia.

This highly practical advanced 11-week on-line modular program builds on the 7-week Fundamentals of Human Factors and Error Management for Safety Critical Industries program and provides participants with a sound understanding of contemporary human factors issues facing any safety critical industry. Whether you are a safety manager, accident investigator or CEO, our human factor course will provide you with an opportunity to understand the cause and consequences of human error and assist you with identifying practical strategies to design error-tolerant solutions.

Several practical case studies presented throughout the human factor course will reinforce generic human factors issues and management solutions across various industries. A comprehensive suite of practical tools, templates and resources are provided for you to take back and apply in your own workplace.

Key Benefits

Upon completion of this advanced human factors and error management training course, you will be able to:

- Understand the evolution of applied human factors in the workplace, its current scope and how it may contribute to addressing future safety challenges

- Understand human error within the context of significant event investigations

- Incorporate practical proactive error management strategies

- Address human performance limitations that impact effective decision-making and increase the probability of error occurrence

- Identify social and group influences that shape human performance

- Adopt a systematic human factors analysis method for incident investigations to better identify errors and error-producing conditions

- Understand the impact of infrastructure, facility and equipment design on human performance and the pros and cons of automation and advanced technology

- Understand the incidence of mental health issues in the workplace and various strategies to support workers

- Identify cultural influences that shape human performance including the practical application of a fair and just culture approach to consequence management

- Adopt a proactive human factors analysis approach to identify the triggers that may lead to a potential fatal/critical risk event and fix conditions before they cause problems

Who Should Participate

This human error training program is designed for those individuals seeking a comprehensive understanding of applied human factors in any workplace. Expected participants include:
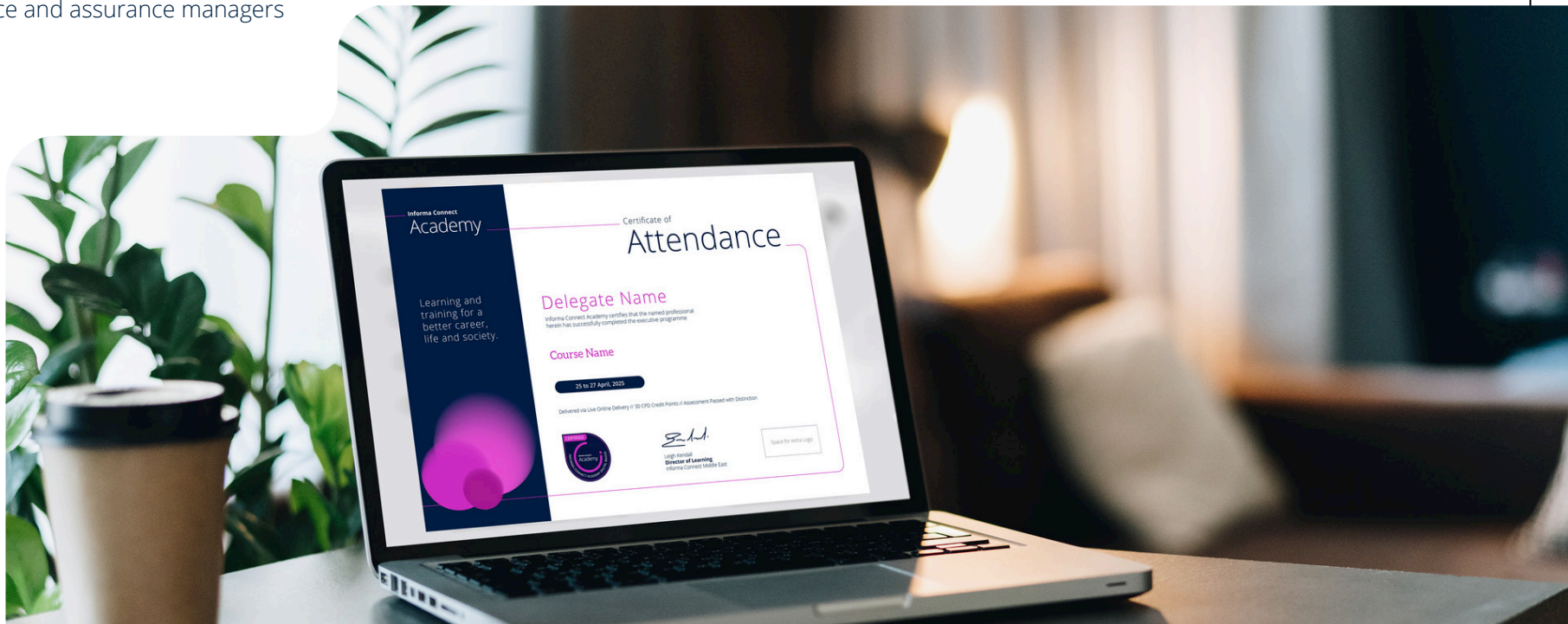
- Operations and Engineering Senior Managers

- Team Leaders and Supervisors

- Human Resource Managers

- HSE and WHS Managers, Investigators and Auditors

- Industry and WHS Regulators

- Quality, risk, compliance and assurance managers

Course Requirements and Certificates

Delegates must meet two criteria to be eligible for an Informa Connect Academy Certificate of Completion:

- **Satisfactory attendance** - Delegates must attend all sessions of the course. Assessments will be ongoing and based on in-class participation and activities.

If delegates have not attended all sessions, the certificate will clearly state the number of hours attended. In-person delegates will receive a printed certificate and virtual delegates will receive a digital certificate.

Course Outline

Module 1: Introduction to Human Factors

- Human factors in context
- Human factors: Past, present and future
- The human factors contribution to significant safety accidents
- A simple human factors model

ACTIVE LEARNING
Case study: Off the rails

ACTIVE LEARNING
Course activity: Towards 2040 – What will be the human factors challenges in your industry in the next 20 years?

Module 2: Introduction to Human Error

- Introduction to human error
- What causes error?
- Different types of errors
- The positive side of error: Human compensatory ability

ACTIVE LEARNING
Course activity: Which error type is it?

Module 3: Practical Error Management Strategies

- Organisational error management strategies
- Managing unintended actions (slips & lapses)
- Managing intended actions (mistakes & violations)
- Error management checklists for inspectors, investigators and auditors

ACTIVE LEARNING
Course activity: Quiz

Module 4: Human Performance Limitations

- Human information processing
- Task demands: Overload and underload
- Fitness for duty
- Managing human performance limitations in rail

ACTIVE LEARNING
Case study: Airtime

ACTIVE LEARNING
Course activity: Participants will examine a flight safety incident to identify human performance limitations and practical management strategies

Module 5: Social & Group Influences on Performance

- Role, status, authority and conformance
- Strategies to improve team performance

ACTIVE LEARNING
Case study: Safety incident

ACTIVE LEARNING
Course activity: Participants will design a program to manage authority gradients

Module 6: A Human Factors Analysis Method for Incident Investigation

- Human factors analysis methods
- Errors and Error Producing Conditions (EPCs)
- Reactive Loss of Control Analysis (R-LOCA) model

ACTIVE LEARNING
Case study: Revisiting off the rails

ACTIVE LEARNING
Course activity: Quiz

Module 7: Major Course Exercise #1 – Reactive Human Factors Analysis

Participants will be provided with the raw data from a video driven safety incident and be required to:

- Use the R-LOCA model to classify the errors and contributing factors, and
- Identify practical strategies to reduce the potential consequences of any errors identified.

Module 8: Design and Automation

- User-centered workplace design principles
- Automation and advanced technology

ACTIVE LEARNING
Case study: Designing for vigilance

ACTIVE LEARNING
Course activity: Participants will design a user-centered driver vigilance system

Module 9: Mental Health, Well-Being & Support Programs

- The incidence of mental health in the workplace
- The impact of mental health on safety
- Practical strategies to support workers

ACTIVE LEARNING
Course activity: Quiz

Module 10: Cultural Influences on Performance

- The influence of safety culture and safety culture maturity
- The essential ingredients of safety culture
- Accountability and just culture

ACTIVE LEARNING
Case study: Safety incident

ACTIVE LEARNING
Course activity: Participants will design a practical cultural improvement program

Module 11: Major Course Exercise #2 – Proactive Human Factors Analysis

- Application of the Proactive Loss of Control Analysis (P- LOCA) method

ACTIVE LEARNING
Course activity: Create your own potential workplace accident

Course Director

Dr Graham Edkins

Dr Graham Edkins is the Chief Executive Officer of Leading Edge Safety Systems, a qualified Organisational Psychologist and has in excess of 30 years experience in conducting major incident investigations in high risk industries and advising authorities and organisations on complex risk, safety management and human factors issues.

He has broad operational experience as a transport safety regulator, airline safety manager and government air safety investigator, having held previous roles with Qantas Airways, Australian Civil Aviation Safety Authority, Public Transport Safety Victoria and the Australian Transport Safety Bureau. Dr Edkins is regularly retained an an independent investigator and expert witness for various civil matters.

"Very satisfied with workshop. Really learned a lot and looking forward to apply it if needed".

Senior Executive Bus Safety
SBS Transit, Singapore

"A highly practical and repeatable process that encourages consistency in event investigation".

Investigator/Auditor
Energy Queensland

"Instructor has good practical knowledge of incident investigations".

Safety Manager
Civil Aviation Authority, Nepal

"Instructor is knowledgeable and helpful. For someone with little".

Senior Flight Safety Executive
Singapore Airlines Limited

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BOOK NOW

🌐 Click Here for Schedules and Pricing

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Informa Connect Academy is a premier provider of global education and training solutions that caters to a diverse range of professionals, industries, and educational partners. We are dedicated to promoting lifelong learning and are committed to offering learners expert guidance, training, and resources to help them stay competitive in a rapidly changing world. Our comprehensive range of courses and programmes are tailored to meet the needs of all professionals, from aspiring specialists to seasoned experts. We partner with elite academic organisations and industry leaders with unmatched expertise in their respective fields to deliver an exceptional learning experience.

ABOUT TIMINGS, PRICING AND DOCUMENTATION

Course fees include documentation, luncheon and refreshments for in-person learners. Delegates who attend all sessions and successfully complete the assessment, will receive a Informa Certificate and any applicable partner certificates. A hard copy will be provided to in-person learners and a soft-copy will be provided to virtual learners.

AVOID VISA DELAYS – BOOK NOW

Delegates requiring visas should contact the hotel they wish to stay at directly, as soon as possible.

To avoid delays, please ensure you apply for your visa several weeks before your intended travel date. Visa processing times can vary.

REGISTRATION, PAYMENTS AND CANCELLATION

All registrations are subject to our terms and conditions which are available at https://informaconnect.com/delegate-terms-and-conditions. Please read them as they include important information. By submitting your registration, you agree to be bound by the terms and conditions in full. All registrations are subject to acceptance by Informa Connect which will be confirmed to you in writing.

A confirmation letter and invoice will be sent upon receipt of your registration. Please note that full payment must be received prior to the course. Only those delegates whose fees have been paid in full will be admitted to the course.

For full cancellation details, please visit https://informaconnect.com/delegate-terms-and-conditions. All cancellations must be sent by email to training@informa.com.au marked for the attention of Customer Services Cancellation. Due to unforeseen circumstances, Informa Connect reserves the right to cancel the course, change the programme, alter the venue, speaker or topics. For full details, please visit www.informaconnect.com/academy.

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