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FUNDAMENTALS + ADVANCED HUMAN FACTORS & ERROR MANAGEMENT FOR SAFETY CRITICAL INDUSTRIES

11-week online course I 2 hours per week I 3 May – 16 July 2021
11-week online course I 2 hours per week I 4 October – 17 December 2021

Our Expert Course Instructor

Dr Graham Edkins is considered one of Australia's leading Safety Management and Human Factors experts and is regularly retained as an independent safety investigator and human factors expert witness for various civil and criminal matters.

Key Learning Objectives

Upon completion of this 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

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ABOUT THE COURSE

"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 report 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 program 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 will reinforce generic human factors issues and management solutions across various industries. A comprehensive suite of practical tools, templates and resources are provided to take back and apply in your own workplace.

WHO WILL BENEFIT

This 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

EXPERT COURSE INSTRUCTOR

Dr Graham Edkins

Organisational Psychologist Dr Graham Edkins is considered one of Australia's leading Safety Management and Human Factors experts and is regularly retained as an independent safety investigator and human factors expert witness for various civil and criminal matters.

As a former Transport Safety Investigator with the ATSB, Manager Human Factors for Qantas Airways, Executive Director of Public Transport Safety Victoria, and Group General Manager for CASA, he brings a wealth of experience and detailed knowledge of contemporary safety regulation, major event investigation and human error management practices.

Dr Edkins has represented both the Victorian and Commonwealth Governments on a number of national forums, including the Standing Committee on Transport (SCOT) Rail Group, Vice Chairman, International Air Transport Association (IATA), Human Factors Working Group, Chair National Rail Safety Regulators Panel and the National Steering Committee for the development of National Rail Model Safety Legislation.

He has successfully designed and delivered customised rail safety investigation and human factors management training programs globally to a variety of public and private sector organisations and cultures.

BENEFITS OF LEARNING ONLINE

Informa Corporate Learning's online courses are new digital, interactive and engaging educational experience designed to maximise learning for professionals with busy schedules and/or small training budgets.

Our online courses are perfect opportunity for busy professionals as they require just 2 hours per week of your time and include an interactive forum for you to ask direct questions about challenges you are facing to expert course leaders.

Modules are released on a weekly basis, so you can pace yourself alongside your peers and you will have access to a comprehensive set of assets to support your learning such as video content, quizzes and case studies.

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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
- Case study: Off the rails
- 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
- 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
- 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
- Case study: Airtime
- 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
- Case study: Safety incident
- 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 (EPC's)
- Reactive Loss of Control Analysis (R-LOCA) model
- Case study: Revisiting off the rails
- 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
- Case study: Designing for vigilance
- Course activity: Participants will design a user centered driver vigilance system

MODULE 9:

MENTAL HEALTH, WELLBEING & SUPPORT PROGRAMS

- The incidence of mental health in the workplace
- The impact of mental health on safety
- Practical strategies to support workers
- 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
- Case study: Safety incident
- 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
- Course activity: Create your own potential workplace accident

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Easy Ways to Register

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

Course Code	Location	Course Dates	Standard Price		4+ Dels Discount
P21GR32ON	Online	3 May – 16 July 2021	$3,125 + $312.50 GST	**$3,437.50**	**Great Savings:** When you book **4 or more** participants! **Call us** today on **+61 (2) 9080 4395** or email **training@informa.com.au** to take advantage of the discount offer.
P21GR32ON02	Online	4 October – 17 December 2021	$3,125 + $312.50 GST	**$3,437.50**	

If you're an international customer based outside of Australia, the GST will be excluded.

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Informa Corporate Learning – On-site & Customised Training

Informa Corporate Learning has a long-standing track record of delivering very successful customised learning solutions achieving real and measurable value for our clients through our senior training consultants.

If you have 8+ interested people, an on-site course can be the ideal solution – giving you the opportunity to customise our course content to your specific training needs, as well as attracting significant savings compared to public course costs.

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Speak with **Anton Long** on **+61 481 995 653** or **Holly Baldwin** on **+61 450 866 597** to discuss your customised learning solution, or email **training@informa.com.au**

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