



Human Factors in Health and Safety

A professional development
programme for the process industries
and resource sector for 2018



In partnership with:



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Introduction

There is an increasing emphasis on the importance of managing human factors to achieve improved safety and business performance in the chemical process industries and resource sector. Major accidents, including those at Longford, Varanus Island, Montara, Gretley and Moura, have highlighted the importance of addressing this aspect of performance. However, many of the safety and operational professionals charged with managing human factors have no formal qualifications or training in the human and behavioural sciences.

Human Factors in Health and Safety is modular training designed to meet the needs identified in the process industries and resource sector. Designed by the Keil Centre and IChemE, this one-year programme intends to develop an understanding of the core human factors issues and outline how to manage them to achieve improved safety performance.

Key features

- content covering human factors in process safety, health and safety, with links to other aspects of business performance
- a modular course design, with short residential events, also providing networking opportunities with like-minded professionals
- advice to help implement human factors solutions
- training is delivered by recognised human factors professionals with significant process industry experience, drawn from a range of resource sector employers, specialist consultancies and industry regulators

Course content

Topics are organised to cover the UK Health and Safety Executive's top human factors issues in major hazard sites, but these topics are just as applicable and relevant to non-UK regulatory frameworks.

The content has been developed in consultation with IChemE's safety and loss prevention specialists.

Who should attend?

The programme is specifically designed for those who want a comprehensive overview of the subject matter, access to practical research-based tools and approaches, and discussion in small groups with acknowledged industry experts.

This may include:

- internal human factors advisors/focal points
- operations managers
- HSE advisors and specialists
- industry regulators

Programme overview

Human Factors in Health and Safety is a one-year programme, consisting of four intensive two-day modules. This is supported by pre-event reading, which together forms a broad human factors educational programme.

The programme caters for two audiences, specifically:

- those who want to complete the whole programme, who would complete the initial consultancy skills pre-reading, and all four two-day modules
- those who wish to attend single modules (subject to availability)

You can join the programme at any point – modules are designed to be completed in any order.

About the programme

Programme schedule and module details

The two-day events will be held in Perth.

Module One	Managing Human Factors	Presenters
Wednesday 21 February 2018	Human factors in risk management	Ronny Lardner
	Managing safety culture and behaviours	Melanie Todd
Evening	Course dinner and networking	
Thursday 22 February 2018	Safety critical communications	Nicole Gray
	Managing organisational change	Martin Anderson

Module Two	Managing Human Failure	Presenters
Wednesday 16 May 2018	Reducing human error	Andy Sutherland
	Managing non-compliance	Melanie Todd
Evening	Course dinner and networking	
Thursday 17 May 2018	Human factors in incident investigation	Emily Novatsis
	Managing personal resilience in the workplace	Nicole Gray

Module Three	Strengthening Organisational Performance	Presenters
Wednesday 8 August 2018	Staffing and workload	Nicole Gray
	Training and competence	Stuart Dickinson
Evening	Course dinner and networking	
Thursday 9 August 2018	Effective supervision and safety leadership	Melanie Todd
	Managing fatigue	Kirsty McCulloch

Module Four	Human Factors and Design	Presenters
Wednesday 14 November 2018	Integrating human factors in design	Andy Sutherland
	Ergonomic risk assessment and workspace design	Christine Aickin
Evening	Course dinner and networking	
Thursday 15 November 2018	Developing effective procedures	Melanie Todd
	Design of the human/machine interface	Zoe Nation

Pre-reading will be sent approximately two weeks prior to the module.

Module structure

Each two-day module will be strictly limited to 50 delegates and cover four key human factors topics. The total group will be split into two sub-groups, with each sub-group further split in to syndicates of six.

Each module will have the same basic structure:

- all sessions delivered by a recognised human factors professional, with significant process industry/resource sector experience
- a mix of theory, case study, discussion and practical exercises in small syndicates
- identification of key success factors in implementation

Delegates are encouraged to keep a learning log throughout the programme.

“ I found the course absolutely great. It provided an insight which has already had a direct impact on some of the work I am doing within my organisation. ”

Ross Swainson, Senior Loss Prevention Specialist,
2016-2017 programme delegate

Course prize

Delegates who complete all four modules are eligible to enter for a course prize for best application of human factors knowledge. Previous winners of this award include:



2013/14 Perth

Raj Sreenevasan, Proteus EPCM Engineers
Mark Leigh, ConocoPhillips, Australia



2013/14 Brisbane

Jane Patterson, Methanex,
New Zealand



2014/2015 Perth

Toro Havini, Bis Industries
Australia



2016/2017 Brisbane and Melbourne

Ross Swainson, Caltex Australia
Tim Sweet, Jacobs

Programme leaders

Christine Aickin is a physiotherapist, certified professional ergonomist and chartered occupational health and safety professional, based in Sydney. Christine has been running her own OHS management consulting business, Workability, since 1995. She has experience in both the public and the private sector in manufacturing, retail, education, cleaning, banking, health, local government, confectionery and telecommunications. Prior to running her own business, she worked in OHS management in the private industry, in teaching and research.

Christine is a Fellow of the Human Factors and Ergonomic Society of Australia and was awarded the Society Medal in 1999. She is a past president of the Society (2010–2012) and remains a member of the board. She is a council member of the International Ergonomics Society and presently chairs the Australian Safety and Health Professionals Association. She is also a Chartered Professional Member of the Safety Institute of Australia.

Martin Anderson is a graduate in psychology with over 25 years of experience in human factors and safety management, in relation to major hazards and complex systems. He has two Master of Engineering degrees - in human factors, and in process safety. Martin is currently the manager, human factors at Woodside, prior to which he played a key role in developing human factors within the UK Health & Safety Executive. He was a specialist inspector for 12 years, regulating human, management and organisational aspects on over 150 major hazard sites.

Martin is a Fellow and Chartered Member of the UK institute of Ergonomics & Human Factors; and was a non-executive director of the institute for 10 years. In 2012 he was presented with the William Floyd Award by the Institute, for outstanding and innovative contributions to ergonomics and human factors.

Stuart Dickinson is a human factors specialist who has been managing a range of projects in safety critical industries for over ten years. Industries in which he has worked include: rail, offshore, chemical/ pharmaceutical and manufacturing. Stuart is principal consultant and director of Human Risk Solutions, a human factors consultancy based in Victoria. He is practiced in the application of a broad range of human factors tools and techniques and has worked in various areas of human factors from assessing the impact of workplace design upon operators' physical stress, to assessing workload and identifying the potential for human error. With regards to training, in recent years Stuart has developed and delivered human factors training for inspectors at NOPSEMA and WorkSafe Victoria.

Stuart is a registered member of the Chartered Institute of Ergonomics and Human Factors.

Nicole Gray is a registered psychologist and principal human factors advisor with The Keil Centre, based in Brisbane. Nicole has worked for many years in applied psychology and human factors across a range of industrial settings, including defence, aviation, rail, and maritime industries. Her specialist interest areas include accident and incident investigation, human error analysis, fatigue risk management, and safety culture and leadership. She also has extensive experience in development and delivery of employee wellbeing programs in challenging environments.

Nicole holds a BA (Psychology) and Master in Human Factors, as well as the Diploma of Transport Safety Investigation. She is a member of the Australian Aviation Psychology Association and the Human Factors and Ergonomics Society of Australia.

Ronny Lardner is an Associate Fellow of IChemE, a chartered occupational psychologist and founder of The Keil Centre Ltd. With 20 years process industry experience, Ronny specialises in the human and organisational factors which affect health and safety. He was a lead contractor for safety culture in the European PRISM human factors project, and is retained as a human factors expert by many process industry clients to advise on safety and work-related stress.

Ronny is a registered psychologist, an Associate Fellow of the British Psychological Society, and regular contributor to IChemE's safety symposia.

Kirsty McCulloch is a principal consultant with Human Systems Group, and is based in Adelaide. She holds a PhD in Applied Behavioural Science, and is a member of the Human Factors and Ergonomics Society of Australia. She is considered a world expert in fatigue risk management, and her methods have been adopted as regulatory models in several industries, across multiple countries. Kirsty also has extensive experience in understanding human failure, human factors in incident investigation, task analysis, critical procedure reviews and safety culture. She has worked in many safety-critical industries, including petroleum, mining, power generation, medicine, emergency services, transport, and manufacturing.

Zoe Nation is the lead human factors & performance advisor for Chevron's Australian business unit based in Perth. Originally qualified as an engineer, Zoë holds a Masters in Human Factors, and is a Fellow of the Chartered Institute of Ergonomics and Human Factors. She has been working in the field of human factors in high risk industries, including rail, aviation, mining and oil and gas, for over 15 years. She currently focuses on embedding human factors tools as part of Chevron's safety management system to improve process safety and reliability. This includes applying human factors requirements in the design and fabrication of plant facilities and control rooms; reducing error through procedure design; analysing and predicting human error and reliability; and improving safety culture through leadership engagement and awareness programs.

Emily Novatsis holds a Bachelor of Science (Honours) degree and a Doctor of Psychology (Organisational) degree, where her research focus was organisational culture. Emily is a registered organisational psychologist and has been a practitioner since 2000, working in human factors and organisational development. She has worked in both internal and external consulting roles and in a range of hazardous industries. Her experience includes six years leading Woodside's human factors team, where she was instrumental in establishing the organisation's human factors programs and internal capability. She currently works with Metro Trains Melbourne in a senior human factors advisory role. Emily's specific human factors areas of expertise are organisational and safety culture, leadership development, change management, design and delivery of engaging learning, competency frameworks, incident investigation, procedure design, and stress management and resilience, and improving safety culture through leadership engagement and awareness programs.

Andrew Sutherland is a human factors consultant and director of HF Integration Pty Ltd. He has over 15 years' experience providing practical consulting services to clients in a range of hazardous industries, including oil and gas, mining, rail and defence. He specialises in human reliability analysis, workspace design, ergonomics and control room design. In 2015, Andrew was elected as a Fellow of the Chartered Institute of Ergonomics and Human Factors in the UK.

Melanie Todd is a principal human factors advisor with The Keil Centre, specialising in accident and incident investigation, human error analysis, fatigue risk management, and training. Prior to joining The Keil Centre, Melanie worked for the Australian Transport Safety Bureau as manager, aviation safety investigation. She has extensive experience in both regulatory and investigative roles as a specialist in human factors.

Melanie holds a Bachelor of Aviation, Masters of Science and Technology in Aviation (Human Factors), and a PhD in Psychology (Human Factors) as well as the Diploma of Transport Safety Investigation. She is the president of the Australian Aviation Psychology Association and a member of the Human Factors and Ergonomics Society of Australia.

About the organisers

The Institution of Chemical Engineers (IChemE)

is the global professional membership organisation for chemical, biochemical and process engineers and other professionals involved in the chemical, process and bioprocess industries. With a membership exceeding 44,000 members in over 120 countries, and offices in Australia, New Zealand, Singapore, Malaysia and the UK; IChemE aims to be the organisation of choice for chemical engineers.

We promote competence and a commitment to best practice, advance the discipline for the benefit of society and support the professional development of our members. We are the only organisation licensed to award Chartered Chemical Engineer and Professional Process Safety Engineer status.

For more details visit www.icheme.org

The Keil Centre, established in 1983, is a private consultancy practice of chartered psychologists and chartered ergonomics and human factors specialists based in Edinburgh, UK and Australia. The Keil Centre has long-standing links with the process industries through our international commercial consulting activities and involvement in IChemE safety conferences, seminars and symposia, and the European Process Safety Centre.

For more details visit www.keilcentre.com.au

Venue

To be confirmed.
All modules will be held in Perth.

Fees

Single module	AUD\$2,300 + GST
All four modules	AUD\$2,000 + GST per module

These fees include attendance at all sessions, all conference documentation, lunch and interval refreshments and group dinner.

All four modules must be booked at the same time to qualify for the discounted rate

How to book

Register online at www.icheme.org/humanfactors

Complete and return the registration form by email to austcourses@icheme.org or by fax to **+61 (0)3 9642 4495**

More details

Visit: www.icheme.org/humanfactors
Tel: **+61 (0)3 9642 4494**
Email: austcourses@icheme.org

Accommodation

Accommodation is not included in the delegate fee.

For information on accommodation and transport options, contact austcourses@icheme.org

CPD **12.5 hrs** per module

CPD **50 hrs** for total programme

Maximum duration for CPD recording

In-company training

If you have several colleagues interested in this course, why not consider running it in-house?

For a quote or to discuss your requirements contact austcourses@icheme.org

Registration form

Human Factors in Health and Safety

Complete this form and return it by email to austcourses@icheme.org or by fax to +61 (0)3 9642 4495

I wish to book a place on:

- Module one** 21–22 February 2018, Perth, WA
- Module two** 16–17 May 2018, Perth, WA
- Module three** 8–9 August 2018, Perth, WA
- Module four** 14–15 November 2018, Perth, WA

Discount code:

I am a member of IChemE: Yes No membership number:

Last name:

First name:

Title (Dr/Mr/Miss/Mrs/Ms/Prof/Eur Ing): Gender: Male Female

Work details – company:

Company ABN :

Job title: Department:

Country: Post/zip code:

Address:

Town/city: County/state:

Direct telephone: Direct fax:

Special dietary requirements:

Email (for pre-course correspondence):

Method of payment (payment must be received in full before the event date otherwise admission cannot be guaranteed)

- Debit my credit/debit card: (payment in AUD\$ only):

Cardholder name (as it appears on the card):

Billing address (if different from above):

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Cardholder's signature: Telephone number:

- Visa Visa Debit MasterCard AMEX

Card number:

Valid from date: / Expiry date: / Issue number: CVC code :

(3 digits on reverse of (debit card only) card or 4 digits on the front of AMEX)
This is mandatory for VISA and MasterCard

- Invoice my company quoting purchase order number:

Note: a registration cannot be processed unless a copy of your purchase order is received with your registration form. Your booking will be confirmed by IChemE on receipt of either: an official purchase order or cleared funds. By submitting this form you have agreed to our terms and conditions and cancellation policy. Terms and conditions are available at: www.icheme.org/terms

Cancellation policy

Written cancellation received up to two weeks before the course will be subject of an administrative charge of AUD\$150 inc GST. No refunds will be made for cancellation received after this date or for non-attendance, but copies of the course documents will still be sent. Substitutions are welcomed at any time up to the start of the course. IChemE reserves the right to modify, or cancel a course up to two weeks prior to the event.

ABN 75 112 253 040

www.icheme.org/humanfactors

Data protection

In accordance with the Data Protection Act IChemE (and companies processing data on its behalf) will hold and use the data contained on this form for administration purposes, to keep you informed of its activities, and offer goods and services provided by the Institution. If you would prefer not to receive IChemE product and service literature mark the box

If you would prefer not to receive emails on IChemE product and service literature mark the box

The Institution is fully registered under the Data Protection Act as both a data user and a computer bureau.

IChemE is a registered charity in England and Wales, and a charity registered in Scotland (SC 039661)

IChemE offices in Kuala Lumpur, London, Melbourne, Rugby, Singapore and Wellington

www.icheme.org

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