



# Human Factors in Health and Safety

A professional development programme for the  
chemical and process industries 2010–2011

# Human Factors in Health and Safety

## A professional development programme for the process industries

### Background and 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. Major accidents, including those at Texas City and Buncefield, have once again 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 behavioural sciences. To help address this gap, The Keil Centre and IChemE have organised this 2-year development programme. It builds upon the needs identified in the process industries, namely:

- content covering human factors in process safety, health and safety generally, with links to other aspects of business performance;
- a modular course design, with short residential events spread over time, also providing networking opportunities with like-minded professionals; and
- consultancy skills development to help implement human factors solutions.

### Who should attend?

This event is specifically designed for and will be of interest to:

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

who want a thorough grounding in the subject matter, access to practical research-based tools and approaches, and discussion in small groups with acknowledged industry experts.

### What is involved?

A programme, comprising four intensive two-day events supported by course reading, which together form a broad human factors educational programme. The two-day events will alternate between Schipol, Netherlands and Edinburgh, UK.

## 2010

Jul	Jul	Aug	Sep	Oct	Nov	Dec
pre-reading			Event 1 Amsterdam 22 & 23 September	pre-reading		

## 2011

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
Event 2 Edinburgh 26 & 27 January	pre-reading			Event 3 Amsterdam 25 & 26 May	pre-reading		Event 4 Edinburgh 28 & 29 September	

This basic structure above 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 events, leading to an IChemE Certificate of Course Completion; and
- those who wish to attend single events (subject to availability).

Reduced rates and priority booking is available for those who commit to the whole programme.

Each two-day event will be strictly limited to 50 delegates, cover 4 key human factors topics. At each event, the total group split into two sub-groups (A and B), with each sub-group further split into syndicates of six.

Each event will have the same basic structure:

- each session delivered by a recognised human factors professionals, with significant process industry experience;
- a mix of theory, case study, discussion and practical exercises in small syndicates; and
- identification of key success factors in implementation, and associated consulting skills.

## About the organisers

This programme has been developed by IChemE in association with The Keil Centre.

IChemE is the hub for chemical, biochemical and process engineering professionals worldwide. We are the heart of the process community, promoting competence and a commitment to sustainable development, advancing the discipline for the benefit of society and supporting the professional development of members. IChemE has a range of products and services to help members to maintain awareness of developments in their field and support their CPD. These include:

- promotion and lobbying;
- professional qualification support;
- specialist subject groups;
- training solutions;
- publications; and
- conferences and seminars.

The Keil Centre is a private firm of Chartered Psychologists based in Edinburgh, UK. The Keil Centre has long-established links with the process industries through involvement in IChemE safety conferences, seminars and symposia, the European Process Safety Centre, and international commercial consulting activities. See [www.keilcentre.co.uk](http://www.keilcentre.co.uk) for more details.

## Detailed course content

The content of the consultancy skills pre-reading and the four modules is described overleaf. The topics are organised to cover the UK Health and Safety Executive's top human factors issues in major hazard sites, and other current issues, eg process safety culture and leadership. The content has been developed in consultation with IChemE's safety and loss prevention specialists.

In partnership with:



Accredited by:



Supported by:



## Internal consultancy skills pre-reading

Recommended core text, supplemented by:

- learning log; and
- consultation with internal customers.

Module 1 Schipol, The Netherlands		Safety Culture & Behaviour	
Wednesday 22 September 2010		Group A	Group B
Morning	Different approaches to understanding and developing safety culture Johnny Mitchell	Programme overview –an introduction to human factors and consultancy skills John Wilkinson & Ronny Lardner	
Afternoon	Programme overview –an introduction to human factors and consultancy skills John Wilkinson & Ronny Lardner	Different approaches to understanding and developing safety culture Johnny Mitchell	
Evening	Course meal and networking		
Thursday 23 September 2010		Group A	Group B
Morning	Process safety culture and leadership Peter Jeffries & Ronny Lardner	Behavioural safety principles Gordon Sellers	
Afternoon	Behavioural safety principles Gordon Sellers	Process safety culture and leadership Peter Jeffries & Ronny Lardner	

Module 2 Edinburgh, UK		Human Reliability and Failure	
Wednesday 26 January 2011		Group A	Group B
Morning	Reducing human error Richard Scaife	Managing violations Charles Shoesmith	
Afternoon	Managing violations Charles Shoesmith	Reducing human error Richard Scaife	
Evening	Course meal and networking		
Thursday 27 January 2011		Group A	Group B
Morning	Human factors in incident investigation Ronny Lardner	Managing fatigue Bill Gall	
Afternoon	Managing fatigue Bill Gall	Human factors in incident investigation Ronny Lardner	

Module 3 Schipol, Netherlands	Organisational Issues	
Wednesday 25 May 2011	Group A	Group B
Morning	Organisational change Martin Anderson	Staffing and workload Andy Brazier
Afternoon	Staffing and workload Andy Brazier	Organisational change Martin Anderson
Evening	Course meal and networking	
Thursday 26 May 2011	Group A	Group B
Morning	Effective supervision Ronny Lardner	Training and competence Paul Leach
Afternoon	Training and competence Paul Leach	Effective supervision Ronny Lardner

Module 4 Edinburgh, UK	Human Factors and Design	
Wednesday 28 September 2011	Group A	Group B
Morning	Human factors integration and workspace design Janette Edmonds	Safety-critical communications Ronny Lardner
Afternoon	Safety-critical communications Ronny Lardner	Human factors integration and workspace design Janette Edmonds
Evening	Course meal and networking	
Thursday 29 September 2011	Group A	Group B
Morning	Developing useable procedures Ian Hamilton	Design of the human / machine interface Janette Edmonds
Afternoon	Design of the human / machine interface Janette Edmonds	Developing useable procedures Ian Hamilton

# Human Factors in Health and Safety

## Industry course recognition

The suitability of the course content has been ratified by senior members of IChemE's Safety and Loss Prevention and Safety Subject Groups. Participants who attend and complete all four modules will be issued with a Certificate of Course Attendance by IChemE.

## Venues

Modules 1 and 3 will be held at:

Hilton Amsterdam Airport Schiphol Hotel  
Schiphol Boulevard 701  
Schiphol  
The Netherlands 1118 BN

Tel: +31 (0) 20 710 40 00  
Fax: +31 (0) 20 710 40 80  
Web: [www.amsterdamairport.hilton.com](http://www.amsterdamairport.hilton.com)

Modules 2 and 4 will be held at:

Norton House Hotel  
Ingliston  
Edinburgh  
EH28 8LX  
Scotland

Tel: 0845 072 7468  
Web: [www.handpicked.co.uk](http://www.handpicked.co.uk)

## Accommodation

Accommodation is not included in the delegate fee. To book accommodation, please contact the hotels directly, quoting IChemE.

## Fees

Single module £1150 + appropriate VAT rate

A discount price of £1000 + appropriate VAT rate per module is offered to delegates who commit to attend the full programme of four modules. This fee will be invoiced before each module.

## Workshop leaders

**Martin Anderson** is a Fellow of the Institute of Ergonomics & Human Factors, with a Masters degree in process safety & loss prevention. He has specialised in the area of human factors and safety management, particularly in relation to major hazards and complex systems, for over 15 years. Since 2001 he has been a specialist inspector at the UK Health and Safety Executive. He is currently leading HSE's response to the safety management, human factors and culture aspects of lessons from the Texas City incident, and is also involved in the follow-up to the Buncefield incident.

**Andy Brazier** is a chemical engineer who has worked as a human factors consultant for 12 years, predominantly in the oil, gas and chemical industries. This experience, when combined with his chemical engineering background, means he is able to address all the risks that impact on business in a practical and effective manner. He has a wide experience of assessing staffing and supervision arrangements at major hazard sites, particularly with regard to organisational change.

**Janette Edmonds** is a Fellow of the Institute of Ergonomics and Human Factors and is Chartered Member of the Institution of Occupational Safety and Health. She has 15 years' of practical ergonomics experience within various industries including the emergency services, defence, oil & gas, rail, telecoms and other applications. Janette was awarded the William F Floyd award in 1999 for her outstanding contribution to ergonomics.

**Bill Gall** is a Chartered Psychologist with 26 years human factors industry experience. He has worked in industry, commercial consulting and as an HSE Inspector; first as a Nuclear Installation Inspector then as an Offshore Inspector. He is currently a human factors advisor to the Energy Institute's Human Factors Working Group, and in this role has developed guidance and tools for industry, including the fatigue guidance.

**Ian Hamilton** is a founding Director of Human Engineering, part of the Lloyds Register Group. He began his career in human factors in the defence sector in 1984 and then moved to air traffic management. For the past 15 years he has worked in consultancy and has expanded his areas of interest to include most aspects of human factors practice, although he maintains a particular interest in workload modelling, human performance prediction, and Human Factors Integration. At Human Engineering Ian has led the growth of the professional team, managing work in

the defence, air, rail, utilities and oil & gas sectors. He has a BSc in Psychology, an MSc in Ergonomics, is a Chartered Psychologist and a Fellow of the Institute of Ergonomics & Human Factors.

**Peter Jeffries** is a Fellow of the Institute of Chemical Engineers, and with his team has responsibility for PHA and human factors at ConocoPhillip's Humber Refinery, and also supports European refining. Previously a Shift Manager, he was one of a team of experienced leaders brought together to implement Process Safety Management at the site following the 2001 Saturate Gas Plant explosion. He is an active member of the Energy Institute's Human Factors Working Group, and Chair of the Humber Chemical Forum human factors group.

**Ronny Lardner** is the Course Director, is a Chartered Occupational Psychologist and Director of The Keil Centre Ltd. With 20 years process industry experience, Ronny specialises in the human and organisational factors which affect health and safety. Example topics include developing safety culture & leadership, reducing human error, improving safe communication, and preventing and managing work-related stress. He was a lead contractor for safety culture in the European PRISM human factors project, and is retained as a human factors expert by several process industry clients. Ronny is an Associate Fellow of the British Psychological Society, and regular contributor to the UK Institute of Chemical Engineers' safety symposia.

**Paul Leach** is a Chartered Occupational Psychologist and lead trainer for Greenstreet Berman Ltd. Paul has significant experience of designing and delivering training interventions within a variety of high hazard industries and organisations of different size and resource. Recent examples include developing and delivering an event for improving risk based decision making in gas escapes; and a program for the maritime and Coastguard Agency on risk management and accident investigation. Paul also has detailed knowledge of competence management, workforce involvement, safety culture, risk management and human reliability assessment.

**Johnny Mitchell** is a Chartered Occupational Psychologist at The Keil Centre Ltd. He has considerable experience of safety culture assessment and improvement projects in the process industries using a range of methods. He conducted an innovative research project in the UK rail industry, which examined the role of trust in ensuring a strong safety culture. Johnny also specialises in developing individual, team and organisational resilience, with a focus on health and safety.

**Richard Scaife** is a Chartered Occupational Psychologist, European Registered Ergonomist and Director of The Keil Centre Ltd. He has twenty years' experience gained initially in defence and air traffic control, and latterly in the process industries. Richard was joint winner of The British Psychological Society's 2006 Practitioner of the Year Award, with his colleague Ronny Lardner, for developing a practical set of human factors analysis tools for the process industries.

**Gordon Sellers** is a Chartered Fellow of the Institution of Occupational Safety & Health and a Fellow of the Institution of Engineering & Technology. He has more than 40 years experience in hazardous industries, including process safety management, operations management of three large toxic gas plants and development of safety management systems. For five years he was UK managing director for a major behavioural safety consultancy and is now an independent consultant with a range of large and small clients. He is an active committee member of IChemE Hazards symposia, IOSH International Group and IOSH Hazardous Industries Group, the last of which is developing a cross-sector peer review process for safety-critical organisations.

**Charles Shoesmith** is a Chartered Psychologist who has many years' international experience consulting in the area of individual and organisational behaviour, cultural development and learning. He has particular expertise in the design and development of innovative and effective solutions to complex organisational and people performance issues. He has consulted across a wide variety of business sectors including the process industries addressing issues such as productivity, health and safety, quality and customer service. He is an extremely effective presenter and trainer, applying his background in learning and educational theory to tailor courses to meet specific needs..

**John Wilkinson** works for the HSE's Installations Directorate as a human and organisational factors team leader. The team's aim is to drive and promote awareness of, and continuous improvement in, priority human factor topics in the onshore COMAH – major hazard – industries. He inspects widely across the UK on COMAH sites, manages the human factors team and strategy, coordinates and produces guidance, manages research, provides training for HID inspectors on human factors, runs workshops and seminars with the industry and intermediaries, writes articles, and presents regularly at other conferences and seminars.

# Registration Form

## Human Factors in Health and Safety

Conferences Department, IChemE, Davis Building, Railway Terrace, Rugby, CV21 3HQ, UK

Tel: +44 (0)1788 578214 Fax: +44 (0)1788 560833

Organisation name: .....

Last name: .....

First names: .....

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

Company: .....

Job title: ..... Department: .....

Country: ..... Post/Zip Code: .....

Preferred address for pre-conference correspondence: Work  Home

Country: ..... Company/House number: .....

Post/Zip code: .....

Address: .....

.....

Town/City: ..... County/State: .....

Telephone: ..... Fax: .....

Email: .....

Special dietary requirements: .....

Please tick relevant box for payment

### I wish to attend (Please tick the relevant box)

- Module 1** 22-23 September 2010, Hilton Amsterdam Airport Hotel, Amsterdam
- Module 2** 26-27 January 2011, Norton House Hotel, Edinburgh, UK
- Module 3** 25-26 May 2011, Hilton Amsterdam Airport Hotel, Amsterdam
- Module 4** 28-29 September 2011, Norton House Hotel, Edinburgh, UK

### Registrations

- £1150 + \*VAT per module
- £1000 + \*VAT Series of 4 modules. Payment to be received before each module

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

\* For modules 1 & 3 VAT will be charged at the Netherlands rate of 19%. If you are an established trader in the Netherlands, please provide your registration number as VAT will not be chargeable. For modules 2 & 4 will be charged at the UK rate of 17.5%

A VAT invoice will be issued upon receipt of payment.



# Registration Form

## Method of payment

**(Payment must be received in full before the event date otherwise admission cannot be guaranteed).**

Your booking will be confirmed by IChemE on receipt of one of the following:

- official purchase order
- cleared funds

Please debit my credit/debit card: (Payment in Sterling only):

Cardholder name (as it appears on the card): .....

Billing address (if different from overleaf) .....

.....

Post/Zip code: .....

Mastercard  Visa  Visa Debit/Delta  Maestro  AMEX  Debit Mastercard

Card Number:

Valid From Date:   /   Expiry Date:   /   Issue Number:  Security Code:.....  
(debit card only)

Card holder's signature: .....

Card holder's telephone number .....

Cheque enclosed (made payable to Institution of Chemical Engineers)

Please send to IChemE, Conferences Department, Davis Building, Railway Terrace, Rugby, CV21 3HQ, UK

Please invoice my company quoting purchase order number ..... Please note that registration cannot be processed unless a copy of your purchase order is received with your registration form. If your company does not use purchase order numbers, please attach a formal request to invoice on your company's letterhead.

## Cancellation policy

Cancellations received in writing 28 days prior to the event will be subject to administration charge of 10% of the fees + VAT. No refunds will be given for non attendance or cancellations received less than 28 days prior to the event. Substitutions will be welcome at any time. We reserve the right to cancel or alter the programme.

## Data protection

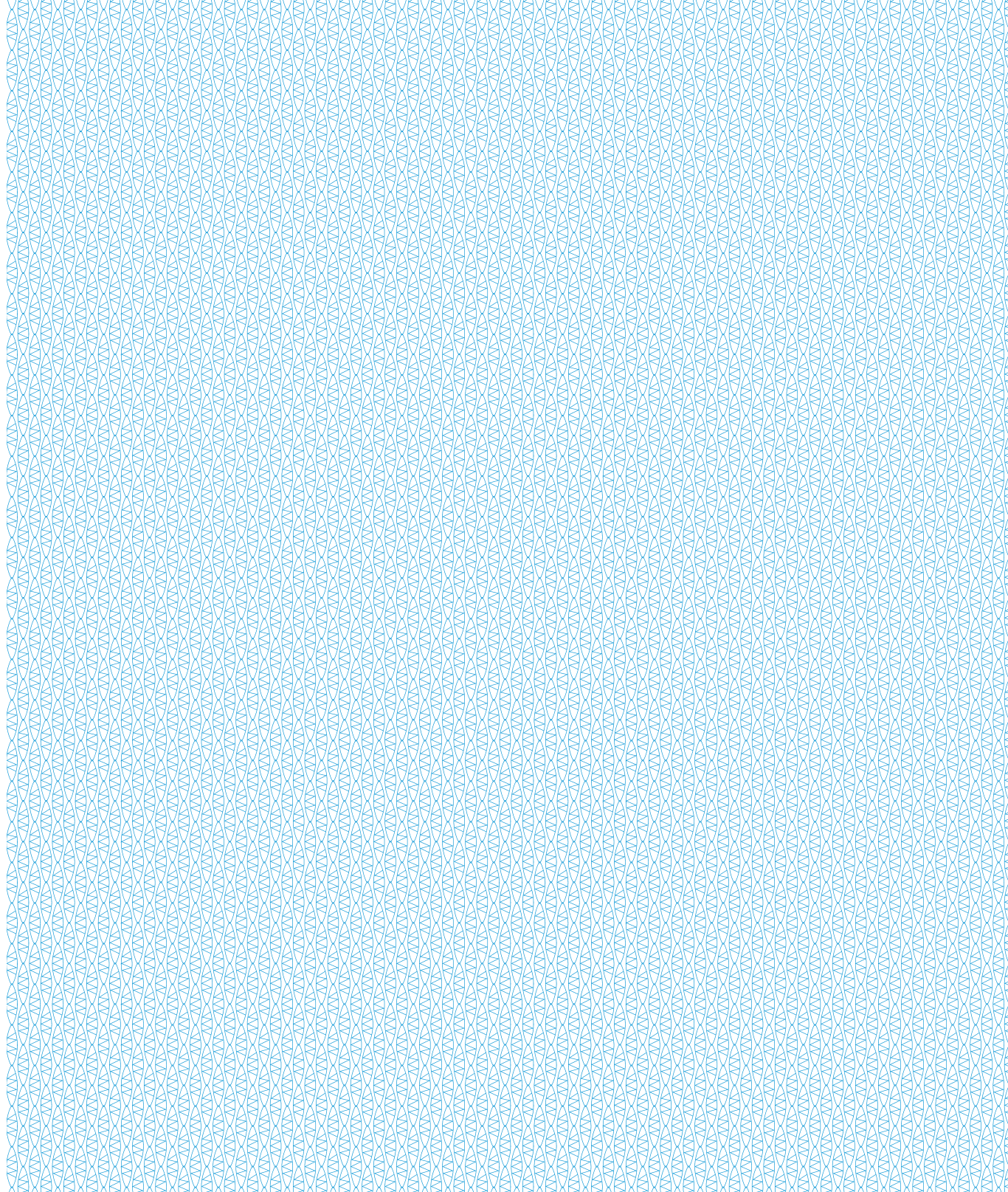
In accordance with the Data Protection Act, IChemE (and companies processing data on its behalf) will hold and use the data contained on this form for administration purposes, to keep you informed of its activities, and offer goods and services provided by the Institution.

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

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

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





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