University of Queensland - St Lucia

30th November - 4th December, 2015

COURSES IN

Leading Risk Management Practice
Human Factors in High Risk Industries
Quality Bowtie Analysis and Critical Control Management
Sustainability Risk Management in Engineering Projects
Introducing Fire Safety in Infrastructure and Industry
About us

An interdisciplinary initiative to deliver practical, evidenced-based outcomes that help hazardous industries address current and future risk challenges.

The vision for UQ RISK is to be a world leader in developing practical and innovative, human-centred operational risk management approaches that deliver real improvements in performance and sustainable competitiveness for hazardous industries.

We provide high quality short course training for hazardous industry professionals. Courses are taught by leading industry practitioners and designed to keep busy professionals abreast of the latest trends, frameworks and practices.
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Leading Risk Management Practice

The aim of this session is to inform participants of the latest practice information and research associated with industrial applications of risk management. The session will be a combination of presentations and discussions that cover:

- Synopsis of current issues/opportunities
- Using ISO31000
- Latest leading-edge research findings in the area of risk management.

**ISSUES ADDRESSED**

- Synopsis of current issues/opportunities
  - How should/could we better address current and future risks
  - What are the emerging issues associated with industry risk management

- Understanding, applying and training others in ISO31000
  - Meanings of the terminology used
  - Strengths and limitations of the framework

- Latest research findings related to hazardous industry risk management
  - Improving risk identification and control
  - The human factors of risk management
  - Systemic risk management
  - Risk and resilience
  - Learning from events

**WHAT DO YOU GET?**

- Access to leading educators and researchers as well as the opportunity to network with other professionals working in the area of risk.
- USB with the course notes and copies of power point presentations.
- Relevant publications and websites that can be used to seek further information.

**WHO SHOULD ATTEND?**

This course is designed for professionals who are interested in understanding how to manage and govern risk as it relates to major industry including managers, project personnel, health and safety specialists, enterprise risk people and others interested in understanding and improving risk management to deliver better business outcomes.

**Course Details**

Presenter - Maureen Hassall

Monday 30th November
Human factors in high risk industries

The aim of this session is to help participants understand and apply the latest approaches to managing human factors issues in industry.

The session will be a combination of presentations and working sessions that cover:

- Overview of human factors
- Identifying and addressing human work issues and opportunities
- Management of physical ergonomics issues

ISSUES ADDRESSED

- Overview of human factors
  - History, definitions and goals of modern human factors practice
  - Approaches to human centred decision and human factor analysis
  - A look into the future of human work
- Identifying and addressing human work issues and opportunities
  - Outline of issues and opportunities (e.g. using human centred decisions to address error inducing situations and to improve human well-being and productivity)
  - Tools and techniques to address the issues and opportunities
  - Case study exercise/analysis
- Management of physical ergonomic issues, human-centred design of equipment
  - Scope and outcomes from physical ergonomic interventions
  - Leading edge approaches to identifying and analysing physical and cognitive ergonomics issues
  - Case study exercise/analysis

WHAT DO YOU GET?

- USB with the course notes and copies of power point presentations.
- Relevant publications and websites that can be used to seek further information.
- Case studies to reinforce course content.

WHO SHOULD ATTEND?

This course is designed for managers, designers, health and safety specialists and incident investigators who are interested in identifying and addressing human factor related risks.

Tuesday 1st December

Presenters- Maureen Hassall and Robin Burgess-Limerick
Quality bowtie analysis and critical control management

The aim of this session is to help participants understand, develop and facilitate quality bowtie analysis and critical control management plans. The session will be a combination of presentations and working sessions that cover:

• Constructing quality bowtie diagrams
• Assessing the adequacy and effectiveness of controls
• Developing assurance management plans for critical controls.
• Linking bowtie analysis into the incident investigation process

ISSUES ADDRESSED

• Bowtie analysis
  - Fundamental theory
  - Approaches to selecting and optimising control suites
  - Analysis of control effectiveness
  - Understanding control dependencies
  - Developing control assurance management plans

• Critical control management
  - Review of ICMM document

• Case study application

• Using bowtie analysis to improve learnings from incidents
  - Review of incidents and our failure to learn
  - Understanding how bowtie analysis can help address and improve our ability to learn and prevent reoccurring events

WHAT DO YOU GET?

• USB with the course notes and copies of power point presentations.
• Relevant publications and websites that can be used to seek further information.
• Case studies to reinforce course content.

WHO SHOULD ATTEND?

This course is designed for managers, designers, health and safety specialists and incident investigators who are interested in identifying and addressing human factor related risks.

Wednesday 2nd December

Presenter - Dr Maureen Hassall
Sustainability Risk Management in Engineering Projects

The aim of this course is to demonstrate the application of risk management approaches to engineering projects and operations for delivering better sustainability outcomes.

The SUSOP sustainability threats and opportunities framework will be used to demonstrate a practical process for managing sustainability risks in engineering projects and operations. Participants will understand how:

• to identify critical project environmental, community and social issues that could compromise the project development or the operation;
• to determine opportunities and threats related to these issues; and
• to develop prioritised innovative solutions aimed at delivering better sustainability outcomes and mitigating critical risks

ISSUES ADDRESSED

DAY 1
• Overview of sustainability principles and frameworks as applicable to engineering practice
• Emerging environmental, social and community issues impacting on engineering project development and operations
• Understanding how sustainability issues affect engineering projects and operations – Group work case study
• Developing sustainability goals for engineering projects - Group work case study
• Identifying sustainability opportunities and threats for engineering projects - Group work case study

DAY 2
• Rating and ranking identified sustainability opportunities and threats - Group work case study
• Prioritising these opportunities and threats - Group work case study
• Producing innovative engineering solutions based on the prioritised opportunities and threats - Group work case study
• Presenting overall sustainability impacts of innovative engineering solutions
• Incorporating outcomes from sustainability risk management approaches into engineering

WHAT DO YOU GET?

• Access to world leading training resources, including sustainability risk management.
• USB with the course notes and copies of power point presentations.
• Relevant publications and websites that can be used to seek further information.
• Case studies to reinforce course content.

WHO SHOULD ATTEND?

This course is designed for project personnel, operations personnel, government regulators, environmental specialists, community specialists and sustainability managers who are interested in improving sustainability risk management to deliver better engineering projects and operations.

Presenter - Glen Corder

Thursday 3rd & Friday 4th December
Introducing Fire Safety in Infrastructure and Industry

The aim of this session is to help participants understand and apply fundamental principles of fire safety in complex industries and infrastructure where deemed to satisfy solutions challenge functionality.

The session will be a combination of presentations and working sessions that cover:

- Overview of the fire safety strategy
- Management of fire and explosion risks
- Identifying and addressing opportunities for engineering solutions

ISSUES ADDRESSED

Morning
- Overview of the fire safety strategy
  - Description of the risk imposed by fire
  - Hazard assessment
  - Structuring a fire safety strategy
- Fire safety countermeasures
  - The role of detection, suppression and fire resistance in the fire safety strategy
  - Egress and the ASET vs RSET concept
- Management of hazard
  - Material flammability and classifications
  - Storage and fuel control
  - The role of fuel management in the fire safety strategy

Afternoon
- Introduction to Fire Dynamics
  - The compartment fire framework
  - Fire growth and the impact of buildings on fires
  - The impact of fires on buildings
- Using building geometry as a countermeasure
  - The effect of building geometry on the fire strategy
- Industrial premises vs public infrastructure
- Case Studies

WHAT DO YOU GET?

- USB with the course notes and copies of power point presentations.
- Relevant publications and websites that can be used to seek further information.
- Case studies to reinforce course content.

WHO SHOULD ATTEND?

This course is designed for managers, designers, health and safety specialists and incident investigators who are interested in identifying fire related risks. This course is not intended to provide competence in engineering calculations but is more directed towards creating awareness among practising professionals.

Thursday 3rd December

Presenter - Prof. José L. Torero
**The Presenters**

**Dr Maureen Hassall**  
*BEng (1st class), BSc(Psych), MBA, PhD*

Maureen Hassall is Associate Professor of Risk at The University of Queensland and is project manager of UQ Risk an university initiative to deliver research and education solutions that address the risk challenges faced by industry. Her areas of research focus on developing and applying risk management and human factors approaches to improve the management of risk in hazardous industries. Maureen also teaches risk management and human factors courses and class at undergraduate, postgraduate and industry professional levels. Prior to joining UQ, Maureen worked for more than 15 years in mining, processing and manufacturing industries in Australia, New Zealand and Canada.

**Prof Robin Burgess-Limerick**  
*BMHS (Hons), PhD, CPE, FHFESA,

Robin Burgess-Limerick is Professor of Human Factors in the Minerals Industry Safety and Health Centre, The University of Queensland. Robin is an experienced human factors and ergonomics researcher and consultant across a range of industries particularly mining, with current projects in the areas of equipment design to reduce injury risks, manual task risk management, and whole body vibration measurement and management. Robin has been a chief investigator on research projects > $4M and is author of more than 100 refereed papers, chapters and books. Robin is a certified professional member (CPE), past-president, and Fellow of the Human Factors and Ergonomics Society of Australia.

**Glen Corder**

Glen is a Principal Research Fellow in the Centre for Social Responsibility in Mining (CSRM) at the Sustainable Minerals Institute (SMI), University of Queensland and has over 25 years’ experience in the resources industries. Since joining SMI in 2004, his research interests have been in the area of responsible resource use and processing. Glen is currently leading a program of work on barriers and enablers for recycling systems in the Wealth from Waste Cluster, a 3-year (2013-2016) research collaboration that aims to identify economically viable options for the recycling of metals from end-of-life products and industrial waste in Australia.

**Prof. José L. Torero**  
*FRSE, FEng, FTSE, FSFPE, FBRE, PhD, CEng*

Professor José L. Torero is the Head of the School of Civil Engineering at The University of Queensland. He is a leader in the field of Fire Safety Engineering where he specializes in the behavior of fire in complex environments such as industrial complexes, forests, tall buildings, novel architectures, tunnels, aircraft and spacecraft. He holds a BSc for the Pontificia Universidad Católica del Perú (1989), and an MSc (1991) and PhD (1992) from the University of California, Berkeley. Jose is a Chartered Engineer (UK), a fellow of the Australian Academy of Technological Sciences and Engineering, the Royal Academy of Engineering (UK), the Royal Society of Edinburgh (UK), the Society of Fire Protection Engineers (USA) and the Building Research Establishment (UK).
The Venue

UQ Engineering Executive Education

The University of Queensland (UQ) is one of Australia’s leading research and teaching institutions. We strive for excellence through the creation, preservation, transfer and application of knowledge. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

In an environment of rapid change, it is essential to embrace life-long learning and regularly update your knowledge and skills in order to maintain pace within your field, stay relevant, and provide the best possible service to employers and clients.

UQ Engineering Executive Education delivers a diverse portfolio of education opportunities, with flexible delivery options designed to meet your ongoing demands on time and budget. These opportunities range from short courses to educational events and post graduate certificates, produced and presented by internationally recognised industry leaders, experts, and practitioners.

The Women’s College

Women’s is an ideal conference destination. Flexible facilities are complemented by impeccable service as our professional event managers work alongside you to create successful events one detail at a time.

Women’s believes in delivering the highest quality fresh foods in a creative style.

Our culinary professionals focus on meeting your individual needs and special dietary requirements are tastefully met.

You will find our convenient location, outdoor spaces and exceptional accommodation a refreshing change from the typical metropolitan city hotel.
Please register me for these courses **2 day minimum**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Dates</th>
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<tbody>
<tr>
<td>1 Leading Risk Management Practice</td>
<td>30 Nov</td>
</tr>
<tr>
<td>2 Human factors in high risk industries</td>
<td>1 Dec</td>
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<tr>
<td>3 Quality Bowtie</td>
<td>2 Dec</td>
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<tr>
<td>4 Sustainability Risk Management in Engineering Projects</td>
<td>3 &amp; 4 Dec</td>
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<tr>
<td>5 Fire Risk</td>
<td>3 Dec</td>
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*Courses start at 9am each morning and finish at 4pm*

**Cost of Registration (inc.GST)**

<table>
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<th>No of days</th>
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<th>3</th>
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<td>Register before 2 November 2015</td>
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<td>$2960</td>
<td>$3320</td>
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<tr>
<td>Register after 2 November 2015</td>
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<td>$2650</td>
<td>$3260</td>
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**Discounts for organisations registering multiple delegates**

- 2 - 3 delegates = 5%
- 4 - 5 delegates = 10%
- 6 and over = 15%

All registrations are attached to confirm this discount

**Registration Details**

First name Dr Mr Mrs Ms ___________________________ Last name ___________________________

Organisation ______________________________________

Address _______________________________________

Phone ___________________________ Email ___________________________

**Payment Details**

- I have enclosed a cheque made payable to University of Queensland
- Or, I authorise you to debit my: □ Visa □ Mastercard
- Or, our Company Purchase Order Number is: ______________________ Please forward a Tax Invoice

Cardholders Name: ___________________________ Card number: ___________________________

Amount: ___________________________ Expiry date: _______/______ Signature ___________________________

Please send completed form to Claire Engle, c.Engle@uq.edu.au, OR contact Claire on (07) 3346 7870
UQ ABN: 63 942 912 684 Credit Card payment must be signed by the Cardholder