Risktec

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Masterclass: IChemE approves Risktec's process safety MSc

For many engineering disciplines, such as mechanical or chemical engineering for example, the professional skills and competencies that need to be met and maintained are well defined and governed. However, for those engineers and scientists working in the field of process safety, the required competencies are less well established. The Institution of Chemical Engineers (IChemE) has perhaps done the most to provide guidance on what this relatively new discipline encompasses.

Professional process safety engineer registration

The IChemE's new Professional Process Safety Engineer registration provides useful guidance on the key areas of knowledge that need to be demonstrated. With over 44,000 members in over 120 countries, the IChemE introduced this registration scheme to provide industry recognition to peer-reviewed practitioners working within process safety. This global, professional qualification is recognised and positioned at the same level as Chartered Engineer or Professional Engineer.

The benefits of becoming a Professional Process Safety Engineer, include:

- Global recognition of competence.
- Demonstration of commitment to the process safety profession.
- Formal process safety qualification, meeting the potential demand from employers.
- Enhanced career opportunities.
- Confidence from the peer-review process.

Full details of the registration scheme are available at the IChemE website (www.icheme.org).

Risktec MSc process safety pathway

Since 2009 Risktec has been delivering an MSc in Risk and Safety Management in partnership with Liverpool John Moores University (LJMU) in the UK. The MSc programme has been developed by Risktec's practising consultants and is intended for practitioners working within high hazard industries. It is available via face-to-face, distance learning and blended learning.

To meet the knowledge requirements of the IChemE's Professional Process Safety registration, Risktec created a specific process safety pathway for the MSc. This pathway was assessed by IChemE against the registration competencies, and the MSc was successfully approved in June 2016 as meeting the knowledge and understanding requirements for the qualification. This means that students



successfully completing the MSc with Risktec will be able to apply for registration as a Professional Process Safety Engineer with just additional evidence of their professional competence. This is currently only the second approval awarded by IChemE.

The topics covered by the process safety pathway are shown in Box 1. Each of the topics is assessed by a short online activity and a longer formal written assignment. The MSc is completed by submission of a process safety related dissertation of about 15,000 words.

Box 1 - MSc: Risk & Safety Management (Process Safety Pathway)

- Principles of risk management
- Research methods in risk and safety
- Hazard identification
- Risk analysis
- HSE management systems
- Risk reduction and ALARP
- Culture, behaviour and competency
- Bowtie risk management
- Physical effects modelling
- Emergency response and crisis management
- Human factors in design and operations
- Incident investigation and analysis

The full MSc programme lasts three years but students can achieve a Postgraduate Certificate (PgCert) after one year or a Postgraduate Diploma (PgDip) after two years.

Distance learning

Process industries such as the oil, gas and chemical sectors are highly international. With this in mind, the MSc is delivered by distance learning via our online learning environment, 'Risktec Online'. The module material comprises slides with explanatory notes and videos, plus references to further reading and useful websites. Students engage in online activities including tests, discussions and group tasks. This approach encourages participation and interaction amongst students. The module teacher actively supports the students throughout the programme. Our distance learning programmes are 100% online, so students can study and submit assessments from anywhere in the world, at a time that best suits them.

Conclusion

Process safety is increasingly recognised as an engineering discipline in its own right, alongside more traditional disciplines such as mechanical or chemical engineering. As such, the IChemE has established a global, professional registration for process safety engineers to recognise and demonstrate their competence and commitment to the profession – and Risktec's MSc in Risk and Safety Management (Process Safety Pathway) is one of the first to meet the IChemE's requirements.

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