



QUALIFI

SUCCESS THROUGH LEARNING
RECOGNISED WORLDWIDE

Qualifi Level 7 International Diploma in Occupational Health and Safety Management

Specification (For Centres)

March 2026

All course materials, including lecture notes and other additional materials related to your course and provided to you, whether electronically or in hard copy, as part of your study, are the property of (or licensed to) QUALIFI Ltd and MUST not be distributed, sold, published, made available to others or copied other than for your personal study use unless you have gained written permission to do so from QUALIFI Ltd. This applies to the materials in their entirety and to any part of the materials.

About QUALIFI

QUALIFI provides academic and vocational qualifications that are globally recognised. QUALIFI's commitment to the creation and awarding of respected qualifications has a rigorous focus on high standards and consistency, beginning with recognition as an Awarding Organisation (AO) in the UK. QUALIFI is approved and regulated by Ofqual (in full). Our Ofqual reference number is RN5160. Ofqual is responsible for maintaining standards and confidence in a wide range of vocational qualifications.

As an Ofqual-recognised Awarding Organisation, QUALIFI has a duty of care to implement quality assurance processes. This is to ensure that centres approved for the delivery and assessment of QUALIFI's qualifications and awards meet the required standards. This also safeguards the outcome of assessments and meets national regulatory requirements.

QUALIFI's qualifications are developed to be accessible to all learners in that they are available to anyone who is capable of attaining the required standard. QUALIFI promotes equality and diversity across aspects of the qualification process and centres are required to implement the same standards of equal opportunities and ensure learners are free from any barriers that may restrict access and progression.

QUALIFI's policy document for learners with specific requirements or who need special consideration is available for centre reference. Centres are responsible for reviewing the applicant's ability to complete the training programme successfully and ultimately achieve a qualification. The initial assessment by the centre will need to take into account the support that is readily available or can be made available to meet individual needs as appropriate. The centre must also consider prior learning and qualifications and they must be in a position to make a judgement on the learner's entry requirements.

Supporting Diversity

QUALIFI and its partners recognise and value individual difference and have a public duty to promote equality and remove discrimination in relation to race, gender, disability, religion or belief, sexual orientation and age.

Learner Voice

Learners can play an important part in improving the quality of this course through the feedback they give. In addition to the ongoing discussion with the course team throughout the year, there are a range of mechanisms for learners to feed back about their experience of teaching and learning. This can include questionnaires and surveys to allow both centres and QUALIFI to understand how we can improve the learner experience.

Contents

| | |
|------------------------------------------------------------------------------------------|----|
| Contents | 3 |
| 1 Introduction..... | 4 |
| 1.1 Why Choose QUALIFI Qualifications? | 4 |
| 1.2 Employer Support for the Qualification Development | 4 |
| 1.3 Qualification Titles and Codes | 5 |
| 1.4 Awarding Organisation | 5 |
| 2 Qualification Purpose, Rational, Aims Outcomes | 5 |
| 2.1 Qualification Purpose | 5 |
| 2.2 Rationale for the Diploma | 5 |
| 2.3 Overall Aims of the Diploma | 6 |
| 2.4 Learning Outcomes | 6 |
| 3. Delivering the Qualifications | 7 |
| 3.1 Quality Assurance Arrangements | 7 |
| 3.2 Access to Study..... | 8 |
| 3.3 Entry Criteria | 8 |
| 4 Structure of the Qualification | 9 |
| 4.1 Units, Credits and Total Qualification Time (TQT)..... | 9 |
| 4.2 Qualification Structure | 9 |
| 4.3 Progression and Links to other QUALIFI Programmes | 10 |
| 4.4 Recognition of Prior Learning | 10 |
| 5 Guidance to Teaching and Learning..... | 11 |
| 6 Learner Support..... | 11 |
| 6.1 Data Protection..... | 11 |
| 7. Assessment..... | 11 |
| 8. Course Regulations | 12 |
| 8.1 Course Requirements | 12 |
| 8.2 Classification of Awards..... | 12 |
| 8.3. Learner Voice | 12 |
| 8.4 Complaints..... | 12 |
| 9 Equality and Diversity | 13 |
| 10. Further Professional Development and Training | 13 |
| Appendix 1: Unit Descriptors..... | 15 |
| QUALIFI Level 7 International Diploma in Occupational Health and Safety Management | 15 |
| Unit OHS701: Management-Driven, Risk-Based Safety Management Systems | 15 |
| Unit OHS702: Globalisation, Sustainability and Safety Culture Performance..... | 18 |
| Unit OHS703: Digitalisation and Incident Investigation | 21 |
| Unit 724: Development as a Strategic Manager | 24 |
| Unit OHS705: Safety Programs and Concepts | 27 |
| Unit OHS706: Ergonomics | 31 |
| Unit OHS707: Industrial Hygiene and Occupational Health | 34 |
| Unit OHS708: Fire Safety | 40 |

1 Introduction

1.1 Why Choose QUALIFI Qualifications?

QUALIFI qualifications look to provide a realistic and broad opportunity for learners seeking career and professional development. They will support learners in realising their potential and provide clear objectives.

These objectives are to:

- provide career path support to learners who wish to develop their management skills, enterprise capabilities and opportunities in their chosen sector
- improve learner understanding of any given business environment and organisations and how they are managed and developed
- develop skills and abilities in learners to support their professional development.

Our qualifications provide a rich mix of disciplines and skills development opportunities. Learners will gain insight into the functioning, objectives and processes of organisations, appreciating their diversity and the influences and impact of external forces on them. The fast-changing and complex business environment and different organisational ability to stay resilient and respond positively to change and opportunities will be explored.

Our qualifications will develop learners' ability to:

- apply analytical and evaluative techniques and to enhance those skills
- investigate issues and opportunities
- develop their awareness and appreciation of managerial, organisational and environmental issues
- use management techniques and practices in imaginative ways
- make use of relevant information from different sources
- develop and encourage problem solving and creativity to tackle problems and challenges
- exercise judgement and take responsibility for decisions and actions
- develop the ability to recognise and reflect on personal learning and improve their personal, social and other transferable skills.

1.2 Employer Support for the Qualification Development

The development of this qualification has been initiated and guided by discussions and idea sharing with a range of employers, providers and existing centres demonstrating the rigor, validity and demand for the qualifications.

Discussions and feedback have been taken throughout the development of the qualification on content, the potential learner audience for the qualification and assessment methods, ensuring a valuable experience and a recognised set of skills, knowledge and understanding is realised.

1.3 Qualification Titles and Codes

This qualification has been accredited to the Regulated Qualification Framework (RQF) and has its own unique Qualification Accreditation Number (QAN). This number will appear on the learner's final certification document. Each unit within the qualification has its own RQF code. The QAN for this qualification is:

Qualifi 7 International Diploma in Occupational Health and Safety Management 603/5639/X

1.4 Awarding Organisation

QUALIFI LTD

2 Qualification Purpose, Rational, Aims Outcomes

2.1 Qualification Purpose

The level 7 International Diploma in Occupational Health and Safety Management is a qualification for aspiring health and safety professionals. It is aimed at learners who are responsible for developing and applying health and safety procedures on a day-to-day basis in an organisation. They are likely to be managers looking to improve their knowledge and skills.

The Diploma is designed to provide learners with the expertise required to undertake a career as a health and safety manager and it also provides a sound basis for progression to postgraduate study.

We hope that centres and learners take the opportunity to learn a great deal from this programme that will provide relevant new skills and knowledge. It is envisaged that this programme will encourage both academic and professional development so that learners move forward to realise not just their own potential but also that of organisations across the industry.

2.2 Rationale for the Diploma

The rationale of the programme is to provide a career path for learners who wish to develop their practice capabilities within the health and safety sector. The expected outcome of the Diploma, which is the achievement of a recognised UK qualification, is for learners to develop the skills required by organisations and the industry globally. This qualification will:

- prepare learners for employment; and
- support a range of roles in the workplace.

This qualification is suitable for part-time learners in the workplace but is equally appropriate for full-time learners who can also participate in formal work placements or part-time employment. Learners can progress into or within employment in the health and safety sector.

2.3 Overall Aims of the Diploma

The Level 7 International Diploma in Occupational Health and Safety Management will require Learners to evaluate a wide range of occupational health and safety implementation standards, risk assessment techniques and models critically and to implement data mining methods. It will also require learners to demonstrate a deep understanding of globalization and sustainability issues that have an impact on the safety culture of an organisation.

By analysing and making critiques of health and safety implementation standards, learners will examine how the different functions and disciplines affect an organisation's HSE strategy, success and the way that it operates.

The qualification requires learners to demonstrate a range of skills required of executive level management including problem solving, research and analytical skills. The qualification will enable learners to deal with the complexities of leadership and strategic management in a business OHS context and to develop their ability to lead change in organisations.

The Qualifi Level 7 International Diploma in Occupational Health and Safety Management aims to give learners the opportunity to:

1. Gain a recognised qualification from an internationally recognised awarding organisation.
2. Learn from a curriculum supported by the most recent content relevant to a contemporary business environment.
3. Develop new skills and knowledge that can be applied immediately.
4. Prepare for higher level positions in management through personal and professional development as a leader that thrives in complex and globally diverse environments.
5. Have assessments marked and moderated by respected professionals with practical experience across a number of business sectors and management fields.
6. Progress along a pathway to gain a higher-level qualification.

2.4 Learning Outcomes

The overall learning outcomes of the Diploma are to:

1. Apply and make critiques of different implementation standards of occupational health and safety management.
2. Evaluate the role of strategic leadership in risk management
3. Review the impact of globalization in an organisation's safety culture
4. Understand and apply the principles of sustainability in safety sector
5. Analyse problem-solving techniques that are specific to risk assessment
6. Manage strategic risks in organisation health and safety domain
7. Analyse the impact of Artificial Intelligence (AI) in occupational health and safety risk management
8. Evaluate risk control measures from a wide range of hazards
9. Apply principles of safety concepts and safety calculation

10. Analyse ergonomic principles, human factors, and workplace design for occupational safety improvement.
11. Evaluate industrial hygiene principles, hazard recognition and exposure prevention strategies.
12. Assess fire safety principles, fire prevention systems, emergency response and waste management.

These are the overall learning outcomes in line with a level 7 qualification. The learning outcomes for each of the units are identified in Appendix 1 within the descriptors.

3. Delivering the Qualifications

3.1 Quality Assurance Arrangements

All centres go through an approval process to be recognised as an approved centre. Centres must have in place qualified and experienced tutors. The experience of tutors and their ability to support learners will be important. Centres must commit to working with QUALIFI and its team of Quality Reviewers/External Verifiers. Continuing professional development (CPD) for tutors is also required.

Approved centres will be monitored by QUALIFI External Quality Reviewers (EQAs) to ensure that learners are provided with appropriate learning opportunities and guidance. EQAs will ask to see and discuss a centre's assessment plans. The suitability of these plans will be agreed with the centre.

QUALIFI's guidance on invigilation, preventing plagiarism and collusion will apply to centres.

Trainer Requirements

- Trainers must be appropriately qualified and occupationally competent in the areas in which they are training. They must have a minimum of 4 years' experience in occupational health and safety for which they will be training and supervising
- They must hold a Level 6 qualification in occupational health and safety
- They must hold a Level 3 Award in Education and Training or equivalent
- They must hold minimum membership level of IOSH at GradIOSH level

Assessor/Examiner Requirements

- Assessors must be appropriately qualified and occupationally competent in the areas in which they are assessing. They must have a minimum of 5 years' experience in occupational health and safety for which they will be assessing
- They must hold a Level 7 qualification in occupational health and safety
- They must hold a Level 3 Award in Education and Training or equivalent
- They must hold minimum membership level of IOSH at CMIOSH level

Internal Verifier/Moderator Requirements

- Internal Verifiers must be appropriately qualified and occupationally competent in the areas in which they are moderating. They must have a minimum of 4 years' experience in occupational health and safety for which they will be verifying internally
- They must hold or be working towards a Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice and/or Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice
- They must demonstrate that they have undertaken Continued Professional Development (CPD) activities relating to occupational health and safety or auditing quality assurance to maintain and update their skills and knowledge within the last year

3.2 Access to Study

All learners should be invited to an induction event to be introduced to the programme in detail through presentations and discussions with tutors and the centre support team.

All learners should be issued with the Certificate handbook, a timetable and meet with their personal tutor and fellow learners. Centres should assess learners carefully to ensure that they take the right qualification and the right pathways or optional units, to allow them to progress to the next stage.

Centres should check the qualification structures and unit combinations carefully when advising learners. Centres will need to ensure that learners have access to a full range of information, advice and guidance in order to support them in making the necessary qualification and unit choices. When learners are recruited, centres need to give them accurate information on the title and focus of the qualification for which they are studying.

All learners must be registered with QUALIFI within 30 days of centre registration.

3.3 Entry Criteria

The qualification has been designed to be accessible without artificial barriers that restrict access and progression. Entry to the qualifications will be through centre interview and learners will be expected to hold the following:

- A minimum of a Level 6 qualification in a related sector or;
- Bachelors in Engineering degree or;
- Masters in Engineering degree or;
- A minimum of 3 years' managerial work experience which demonstrates current and relevant industry knowledge.

In certain circumstances, individuals with considerable experience but no formal qualifications may be considered, subject to interview and being able to demonstrate their ability to cope with the demands of the programme.

4 Structure of the Qualification

4.1 Units, Credits and Total Qualification Time (TQT)

The QUALIFI Diploma in Occupational Health and Safety Management is a Level 7 qualification with 8 mandatory units, 120 credits and 1200 TQT.

These units have been designed from a learning time perspective and are expressed in terms of Total Qualification Time (TQT). TQT is an estimate of the total amount of time that could reasonably be expected to be required for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a Qualification. TQT includes undertaking each of the activities of Guided Learning, Directed Learning and Invigilated Assessment.

Examples of activities which can contribute to Total Qualification Time include:

- guided learning
- independent and unsupervised research/learning
- unsupervised compilation of a portfolio of work experience
- unsupervised e-learning
- unsupervised e-assessment
- unsupervised coursework
- watching a pre-recorded podcast or webinar
- unsupervised work-based learning.

Guided Learning Hours (GLH) are defined as the time when a tutor is present to give specific guidance towards the learning aim being studied on a programme. This definition includes lectures, tutorials and supervised study in, for example, open learning centres and learning workshops. Guided Learning includes any supervised assessment activity; this includes invigilated examination and observed assessment and observed work-based practice.

Some examples of activities which can contribute to Guided Learning include:

- classroom-based learning supervised by a tutor
- work-based learning supervised by a tutor
- live webinar or telephone tutorial with a tutor in real time
- e-learning supervised by a tutor in real time
- all forms of assessment which take place under the immediate guidance or supervision of a tutor or other appropriate provider of education or training, including where the assessment is competence-based and may be turned into a learning opportunity.

4.2 Qualification Structure

The **Qualifi Level 7 International Diploma in Occupational Health and Safety Management** comprises four units in total. All units are mandatory, and all units cover a number of topics relating to learning outcomes.

| Unit Reference | Mandatory Units | Level | TQT | Credits | GLH |
|----------------|--------------------------------------------------------------|-------|-----|---------|-----|
| R/618/0212 | Management-Driven, Risk-Based Safety Management Systems | 7 | 150 | 15 | 50 |
| L/618/0211 | Globalisation, Sustainability and Safety Culture Performance | 7 | 150 | 15 | 50 |
| J/618/0210 | Digitalisation and Incident Investigation | 7 | 150 | 15 | 50 |
| J/506/9064 | Development as a Strategic Manager | 7 | 150 | 15 | 60 |
| Y/652/1363 | Safety Programs and Concepts | 7 | 150 | 15 | 60 |
| A/652/1364 | Ergonomics | 7 | 150 | 15 | 60 |
| D/652/1365 | Industrial Hygiene and Occupational Health | 7 | 150 | 15 | 60 |
| F/652/1366 | Fire Safety | 7 | 150 | 15 | 60 |

4.3 Progression and Links to other QUALIFI Programmes

Learners completing the QUALIFI Level 7 International Diploma in Occupational Health and Safety Management can progress to:

- a QUALIFI Level 7 Diploma,
- directly into employment in an associated profession,

4.4 Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether learners can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess, and so do not need to develop through a course of learning.

QUALIFI encourages centres to recognise learners' previous achievements and experiences whether at work, home or at leisure, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning. RPL enables recognition of achievement from a range of activities using any valid assessment methodology. Provided that the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification.

Evidence of learning must be valid and reliable. For full guidance on RPL please refer to QUALIFI's policy document on RPL.

5 Guidance to Teaching and Learning

To ensure consistency and quality of delivery amongst centres, QUALIFI has outlined a number of policies and procedures required to ensure the very best standards are available to learners. These include:

- expertise of staff
- learning and teaching methods
- study skills
- learning resources
- personal development planning
- career opportunities.

The policies and procedures are available on request to all accredited centres or to those wishing to apply for accreditation to deliver QUALIFI qualifications.

6 Learner Support

Centres should continue to support learners and encourage appropriate behaviour. To ensure consistency and quality of delivery amongst centres, QUALIFI has outlined a number of policies and procedures to ensure the very best standards are available to learners. These include:

- learners with disabilities
- health and safety
- conduct
- progression
- weekly timetable/attendance requirements.

The policies and procedures are available on request to all accredited centres or to those wishing to apply for accreditation to deliver QUALIFI qualifications.

6.1 Data Protection

All personal information obtained from learners and other sources in connection with studies will be held securely and will be used during the course and after they leave the course for a variety of purposes. These should be all explained during the enrolment process at the commencement of learner studies. If learners or centres would like a more detailed explanation of the partner and QUALIFI policies on the use and disclosure of personal information, please contact QUALIFI via email support@QUALIFI-international.com

7. Assessment

This qualification is vocational as can support a learner's career progression. To meet QUALIFI's aim to provide an appropriate assessment method, each unit will be assessed through tasks that will be written in a way to make them realistic 'work-related' tasks wherever possible. Learners will need to demonstrate their

knowledge, understanding, original thought, problem-solving and recommendations on actions will also be asked for where appropriate. Intellectual rigour will be expected that is appropriate to the level of the qualification.

Assignments will contain a question strand for each of the given unit's learning outcomes. The assignment tasks will address the LO (learning outcome) and AC (assessment criteria) requirements. Within assignments, there will always be requirements for learners to engage with important and relevant theory that underpins the subject area.

The assignment questions will require learners to draw on real organisations to illustrate their answers. Mature and part-time learners will ideally be able to draw on their personal work experience too.

Sample assessments and marking schemes are available on request as part of the Qualification Specification supplied to centres.

For further information please contact Qualifi.

8. Course Regulations

8.1 Course Requirements

Learners must complete all units and pass the appropriate mark to receive the full Certificate Award.

QUALIFI will issue certificates to all successful learners through the registered centres.

8.2 Classification of Awards

This qualification is pass/fail.

Decisions about the overall achievements of awards are made by QUALIFI through the application of the academic and relevant course regulations. It is based on the Average Percentage Mark (APM) or, at the discretion of QUALIFI, on the basis of learners' overall profile and performance subject to the minimum requirements.

8.3. Learner Voice

Learners can play an important part in improving the quality of this course through the feedback they give. In addition to the ongoing discussion with the course team throughout the year, there is a range of mechanisms for learners to feed back about their experience of teaching and learning.

8.4 Complaints

QUALIFI recognises that there may be occasions when learners and centres have cause for complaint about the service received. When this happens, the complaints procedure is intended to provide an accessible, fair and straightforward system that ensures as an effective, prompt and appropriate response as possible.

For more information on our formal complaints procedure please contact in the first instance or email: support@QUALIFI-international.com

9 Equality and Diversity

QUALIFI recognises that discrimination and victimisation are unacceptable and that it is in the interests of QUALIFI employees to utilise the skills of the total workforce. It is our aim to ensure that no employee or other representative of QUALIFI receives less favourable facilities or treatment (either directly or indirectly) in recruitment or employment on grounds of age, disability, gender/gender reassignment, marriage/civil partnership, pregnancy/maternity, race, religion or belief, sex, or sexual orientation (protected characteristics).

Our aim is that our workforce will be truly representative of all sections of society and each employee feels respected and able to give their best. We oppose all forms of unlawful and unfair discrimination or victimisation. To that end the purpose of this policy is to provide equality and fairness for all.

Our staff will not discriminate directly or indirectly, or harass customers or clients because of age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation in the provision of QUALIFI's goods or services.

This policy and the associated arrangements shall operate in accordance with statutory requirements, particularly the Equality Act 2010 <https://www.gov.uk/equality-act-2010-guidance>. In addition, full account will be taken of any guidance or codes of practice issued by the Equality and Human Rights Commission, any government departments, and any other statutory bodies.

The policy document will be monitored and reviewed annually and can be downloaded from our website or by making contact with QUALIFI.

10. Further Professional Development and Training

QUALIFI supports UK and international customers with training related to our qualifications. This support is available through a choice of training options offered through publications or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing learner-centred learning and teaching approaches □ building in effective and efficient quality assurance systems.

You can request customised training through your registered centre in the first instance. If you need to contact QUALIFI directly:

Our customer service number: +44 (0) 1158882323

Or email: support@QUALIFI-international.com

Website: www.QUALIFI.net www.QUALIFI-international.com

Appendix 1: Unit Descriptors

QUALIFI Level 7 International Diploma in Occupational Health and Safety Management

Unit OHS701: Management-Driven, Risk-Based Safety Management Systems

Unit code: R/618/0212

RQF level: 7

Unit Aim

This unit aims to provide learners with the knowledge of ISO 45001:2018 - the implementation standard for occupational health and safety management systems (OHSMS). It will also evaluate the processes of risk management, risk communication and risk transfers.

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|----------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Develop and implement ISO 45001:2018-compliant OHSMS. | 1.1 | Evaluate the extent to which the processes of an OH&S management system link to ISO 45001:2018 clauses. |
| | 1.2 | Analyse the gaps to be bridged to satisfy the requirements of ISO 45001:2018. |
| | 1.3 | Evaluate the challenges faced by an organisation while implementing ISO 45001:2018-compliant OH&S management system. |
| | 1.4 | Evaluate the importance of understanding the organisation and its context whilst framing OH&S management systems. |
| | 1.5 | Analyse the external and internal issues that have an impact on the way an organisation manages its OHSMS responsibilities. |
| | 1.6 | Assess the way in which the activities of sub-let renters might have a negative impact on an organisation's OH&S systems. |
| | 1.7 | Differentiate between OHS standards. |
| | 1.8 | Ensure the alignment of the OHSMS with an organisation's strategic goals and that it meets legal, regulatory and compliance requirements. |
| 2. Evaluate strategic risks to an organisation through the | 2.1 | Evaluate the role of leadership in organisational risk reduction. |

| | | |
|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| implementation of a quantifiable risk model. | 2.2 | Analyse the value of the Entropy Model of accident causation in managing the impact of risk. |
| | 2.3 | Analyse the requirements of performing fault tree analysis. |
| | 2.4 | Analyse the relevance, validity and value of different data sources and information to implementing a quantified risk model. |
| | 2.5 | Evaluate the internal and external factors influencing the selection of different risk quantification methods. |
| | 2.6 | Develop practicable action plans that improve controls to reduce strategic risks. |
| | 2.7 | Develop practicable strategies on the ways in which an organisation can assess hazards and risks following changes in an organisation's management, processes or equipment. |
| | 2.8 | Analyse the pitfalls in contractual risk transfer. |
| | 2.9 | Analyse the interdependencies between different types and categories of strategic, aggregated, dynamic risks. |
| | 3. Articulate risk communication strategies in various situations. | 3.1 |
| 3.2 | | Assign ownership and accountabilities for strategic, aggregated, dynamic risks. |
| 3.3 | | Evaluate the importance of communication and consultation in a risk management process. |
| 3.4 | | Analyse the way in which crisis communication differs from risk communication. |

Indicative Content

- Components: plan, do, check, act; scope and context of H&S; ISO standard of OHS; OHSAS 18001:2007; OHSAS 45001:2018 for health and safety (H&S) management; occupational safety and health (OSH) management in high risk workplace environments (LO1).
- Accident causation theories, risk management framework, risk analysis techniques, risk communication, risk transfer, benefits of risk framework in safety and health; fault tree, Dominoes theory, Swiss Cheese model, Entropy model; statistics of mean, median, mode, probability distribution, bell curve in statistics; (LO2).
- Risk communication, risk consultation, risk communication stakeholders (LO3).

Recommended Texts

- *Managing for Health and Safety* (HSG 65), Health and Safety Executive - <http://www.hse.gov.uk/pUbns/priced/hsg65.pdf>, HSE Books, ISBN: 978-0- 7176-6456-6
- *ISO 45001:2018 Occupational Health and Safety Management Systems*, ISO, ISBN: 978-0- 580-86393-6
- *Plan, Do, Check, Act, An Introduction to Managing for Health and Safety*, [INDG275](#), HSE Books
- *Managing the Risks of Organisational Accidents 1st Edition, Kindle Edition*, ISBN: 1840141050
- *Health and Safety: Risk Management 5th Edition, Kindle Edition* ASIN: B07MC9995K

Unit OHS702: Globalisation, Sustainability and Safety Culture Performance

Unit code: L/618/0211

RQF level: 7

Unit Aim

This unit aims to provide learners with the knowledge of globalization, the sustainability effects on safety culture, the psychological factors affecting safety, a whole-organisation approach to OHS and the measurement of safety performance.

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|----------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------|
| 1. Evaluate the effects of globalisation on safety culture. | 1.1 | Evaluate the impact of globalisation on the safety climate of an organisation. |
| | 1.2 | Analyse the way in which perceptions of safety and unsafe behaviour vary between migrant workers and indigenous workers. |
| | 1.3 | Evaluate the role of management in ensuring the development of workers' competence |
| | 1.4 | Develop practicable strategic and operational plans for the effective management of OHS in multi-employer worksites. |
| | 1.5 | Analyse the way in which Globally Harmonised Systems (GHS) can improve the communication of hazards. |
| 2. Evaluate the benefits of sustainability in the workplace. | 2.1 | Develop a business case for the inclusion of OSH in sustainability strategies. |
| | 2.2 | Evaluate the challenges, opportunities and strategic business benefits in promoting sustainable workplace health and safety. |
| | 2.3 | Specify the metrics to be included that measure a sustainable OHS practice in the workplace. |
| 3. Measure safety performance and calculate safety return on investment (ROI). | 3.1 | Analyse the way in which error management can improve the safety performance in OHSMS. |
| | 3.2 | Develop a practicable model for calculating the ROI of safety management system in operational and strategic terms. |
| | 3.3 | Develop a data mining method that measures the performance of the safety culture. |

| | | |
|-----------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. Understand the effects of psychological health, injury management and rehabilitation in the workplace. | 4.1 | Evaluate the role of management in promoting good mental health. |
| | 4.2 | Analyse the challenges in dealing with mental health within the workplace. |
| | 4.3 | Analyse the way in which the human rights of workers with mental health conditions should be protected in the workplace. |
| | 4.4 | Analyse the factors and conditions contributing to workplace violence. |
| | 4.5 | Analyse the early indicators of workplace confrontation. |
| | 4.6 | Analyse the barriers to the implementation of Psychological Health and Safety Management System (PHSMS) in the workplace. |
| | 4.7 | Analyse the ways in which an injury management programme can have an impact on workers' morale. |
| | 4.8 | Evaluate the potential costs of poor psychological and physical health and poor morale to an organisation (strategic impact; PR and organisational reputation; operational considerations etc). |
| 5. Lead the implementation of a whole-organisation approach to OHS. | 5.1 | Evaluate the case for the integration of occupational safety and health into an organisation's business activities |
| | 5.2 | Develop a practicable whole-organisation approach to occupational health and safety in an organisation. |
| | 5.3 | Analyse the relevance of whole-organisation approach in tackling bullying and violence. |
| | 5.4 | Scope the nature of interdependencies in the components of an OHS system. |
| | 5.5 | Develop a strategic response and operational plans that address aggregated, interdependent H&S risks. |

Indicative Content

- Globalisation impact on OHS, safety culture; migrant issues in OHS, management role in globalization, globally harmonized systems (LO1).
- Safety and Sustainability, United Nations Sustainability, metrics for sustainability, OHS integration with sustainability, sustainability goals (LO2).
- Error Management theory and analysis, construction site error techniques, safety culture performance, key metrics for safety culture, safety ROI models, ROI calculations in risk (LO3).
- Mental health issues , OHS psychosocial stressors, management role in promoting mental health, mental health old workers, PHSMS, standardisation of PHSMS, psychosocial hazards, violence at work, drugs at work, shift work, temporary workers issues; potentially negative impacts: strategic impact; PR and organisational reputation; operational considerations etc (LO4).
- Whole school approach to OHS, school management in OHS, school health environment; interdependencies and aggregated H&S risks e.g. conflicts between safety and security (LO5).

Recommended Texts

- http://www.euro.who.int/_data/assets/pdf_file/0018/124047/e94345.pdf
- <https://www.who.int/docstore/bulletin/pdf/2001/issue9/bu1288.pdf>
- <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- *Handbook of Mental Health in the Workplace Online* ISBN: 9781452229386
- *Inclusion: Developing An Effective Whole School Approach: Developing an Effective Whole School Approach 1st Edition* ISBN-13: 978-0335236046
- *Reducing error and influencing behaviour* (HSG48), HSE Books, ISBN: 978-0-7176-2452-2
- *Involving your workforce in health and safety*, [HSG263](#), HSE Books, ISBN: 978-0-7176-622

Unit OHS703: Digitalisation and Incident Investigation

Unit code: J/618/0210

RQF level: 7

Unit Aim

This unit aims to provide learners with the knowledge of digitalisation and risk assessment approaches to various types of hazards.

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|--------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Understand the effects of digitalisation on strategic and operational OHS. | 1.1 | Evaluate the impact of digitalisation on occupational safety and health. |
| | 1.2 | Analyse the ways in which advanced robotics and artificial intelligence (AI) can contribute to the reduction of risks. |
| | 1.3 | Analyse the way in which advanced robotics and artificial intelligence could be detrimental to workers' mental health and develop a response that addresses these risks. |
| 2. Implement biohazards risk assessment and control measures in the workplace | 2.1 | Analyse the way in which exposure and context assessment are used in risk management. |
| | 2.2 | Analyse the way in which different workplaces can be protected from infection. |
| | 2.3 | Develop a strategy that is capable of limiting the spread of infection in different workplaces. |
| | 2.4 | Analyse the requirements of a risk communication strategy to prevent the spread of infection. |
| 3. Understand the implementation of ecological risk assessment and control measures. | 3.1 | Analyse the way in which the strategic and management goals of an organisation may be met whilst addressing the impact of industrial activities on an ecosystem. |
| | 3.2 | Develop a realistic risk hypothesis for an organisation's ecological activities. |
| | 3.3 | Quantify an assessment endpoint for an organisation's industrial activities. |

| | | |
|---------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 3.4 | Evaluate the strategic and operational requirements of an ecological risk assessment that assesses the risks posed by industrial effluent on downstream ecosystems. |
| 4. Implement engineering solutions for ergonomic hazards and control measures. | 4.1 | Analyse the ergonomic risk factors in the workplace and their strategic and operational implications. |
| | 4.2 | Develop practicable ergonomic solutions that address risks in the workplace and their strategic and operational implications. |
| | 4.3 | Quantify the costs and benefits of ergonomic solutions in the workplace. |
| 5. Analyse the requirements of the implementation of risk assessment for biological outbreaks and control measures. | 5.1 | Analyse the requirements of strategic risk and rapid risk assessment for biological outbreaks. |
| | 5.2 | Analyse the requirements of immediate, mid- and longterm control measures to be implemented. |
| | 5.3 | Analyse the factors to be considered for a post- disaster assessment and after-action reviews. |
| 6. Analyse the likely OHSMS failure scenarios for chemical hazards and control measures. | 6.1 | Analyse the OHSMS requirements of process areas and identify likely failure points. |
| | 6.2 | Analyse the suitability and sufficiency of control measures for a process area and develop plans for improvement. |
| 7. Implement an accident causal analysis model for physical hazards. | 7.1 | Identify the cause of an accident through the application of root cause analysis |
| | 7.2 | Develop practicable plans for the avoidance of similar accidents. |
| | 7.3 | Assess the costs to an organisation of physical accidents (financial; loss of time; reputational damage, protests, complaints and worker welfare issues etc). |
| | 7.4 | Quantify the benefits of enhanced safety controls. |

Indicative Content

- Digitalization impact on OHS, Artificial Intelligence (AI), Machines, Gaming, Virtual Reality, OHS state of art, Cobots, latest technology in OHS (LO1).
- Biological hazards, Ecological hazards, physical hazards, chemical hazards, strategic risk assessment, rapid risk assessment, control measures, outbreak, WHO Risk management processes, engineering solution for Ergonomics (LO2 to LO7).

Recommended Texts

- *HSE's The Health and Safety Toolbox: how to control risks at work*, HSE Books

- *Investigating accidents and incidents – a workbook for employers, unions, safety representatives and safety professionals*, HSG245, HSE Books
- *Risk assessment, A brief guide to controlling risks in the workplace*, INDG163, HSE Books *Regulation (EU) 2016/425 on personal protective equipment at work, European Regulation Personal protective equipment (PPE) at work; A brief guide*, INDG174, HSE Books
- *Physical and Biological Hazards of the Workplace, 3rd Edition*, ISBN: 9781118928608
- *Biological and Environmental Hazards, Risks, and Disasters 1st Edition eBook* ISBN: 9780123964717

Unit 724: Development as a Strategic Manager

Unit code: J/506/9064 RQF level:

7

Unit Aim

The unit aims to support organisational and self-awareness in learners. It provides a foundation for a self-critical and reflective approach to personal development to support the learner when operating at a strategic level. Wider context organisational and environmental factors are also considered as contributors to overall strategic success of the individual and the organisation.

Learning Outcomes and Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Identify personal skills to achieve strategic ambitions. | 1.1 | Critically analyse the strategic direction of the organisation. |
| | 1.2 | Critically evaluate the strategic skills required of the leader operating in a complex environment to achieve personal and organisational strategic ambitions. |
| | 1.3 | Assess the relationship between existing, required and future skills to achieve strategic ambitions. |
| 2. Manage personal leadership development to support achievement of strategic ambitions. | 2.1 | Critically discuss the opportunities to support leadership development. |
| | 2.2 | Design a personal development plan to direct leadership development in a complex environment. |
| | 2.3 | Devise an implementation process to underpin the success of the development plan that can realise substantial changes in leadership style. |
| 3. Evaluate the effectiveness of the leadership development plan. | 3.1 | Critically evaluate the achievement of outcomes of the plan against original objectives. |
| | 3.2 | Evaluate the impact of leadership style and the achievement of objectives on strategic ambitions in different organisational settings. |
| | 3.3 | Critically review and update the leadership development plan. |
| 4. Advocate an employee welfare environment that supports organisational values. | 4.1 | Critically evaluate the impact of corporate commitment to employee welfare on strategic organisational objectives. |
| | 4.2 | Discuss how an employee welfare environment can affect achievement of strategic organisational objectives. |

| | | |
|--|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 4.3 | Determine the influence of corporate commitment to employee welfare on the development of organisational values that will realise strategic ambitions. |
|--|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------|

Indicative Content

The indicative content for learners includes, but is not limited to, the following:

- Approaches to business strategy
- Old and new business models
- Strategy evolution
- Resource based approach to strategy
- Analysis of the environment
- Honey and Mumford learning styles
- Personal development and gap analysis including developing yourself
- Career anchors (Edgar Schein)
- Blanchard, Adair, Blake and Mouton Models on leadership and development
- Argyris’ double loop learning
- Reddin’s 3D and Belbin’s team roles
- Skills competences and know-hows including core and distinctive competences
- Intellectual capital and balance score card methods
- Development of a personal development plan (PDP)
- Health and safety at work
- Erikson’s Life Stage Theory
- Nudge Theory
- Psychological Contract
- Kirkpatrick’s Learning Evaluation Model
- Erikson’s Theory of Personal Development (1902 – 1994)
- Developmental and Sponsorship Mentoring
- Formal and Informal Coaching.

Learners will further be introduced to, and encouraged to discuss, some of the management models, concepts and ideas that could be used to help them set departmental, project, team and their own objectives.

Core Text

Human resource management at work Marchington, M. and Wilkenson, A 2008

Recommended Texts

- The CIPD Employee Outlook report is based on a twice-yearly survey of over 2,000 UK employees conducted by YouGov on behalf of the Chartered Institute of Personnel and Development, well worth a general read
- Organisational Behaviour, ARVINEN MUONDON and PERKINS, KOGANPAGE
- Human resource Management in a Business Context, KEW and STREDWICK, CIPD
- Strategy and human resource, BOXALL, P. and PURCELL, J. (2008)CIPD
- Learning and Development Talent, Jim STEWART and CLARE RIGG, CIPD
- Contemporary strategy analysis. 6th ed. GRANT, R. (2008), Blackwell.
- Exploring Corporate Strategy, JOHNSON and SCHOLES, PRENTICE HALL
- Strategic Management and Organisational Dynamics: The Challenge of Complexity to Ways of Thinking about Organisations. 6th ed. Stacey, R., (2011), Financial Times Prentice

Unit OHS705: Safety Programs and Concepts

Unit code: Y/652/1363

RQF level: 7

Unit Aim

This unit aims to develop learners' knowledge and skills in occupational health and safety management by covering operational hazard control, safety calculations, incident measurement, hazardous energy control systems, and specialised workplace safety programs across high-risk environments.

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|--------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Analyse storage, rigging, trenching and excavation, and fall protection calculations in occupational health and safety management | 1.1 | Evaluate the application of storage capacity calculations in occupational health and safety management, and calculate how long it would take to empty half of a 900-gallon tank if a pump removes 300 gallons per hour |
| | 1.2 | Analyse the importance of hoisting, rigging, and load calculations in reducing high-risk operational hazards and maintaining safe lifting operations. Using the given scenario, calculate the Lifting Index (LI) where Load = 46 lb and Recommended Weight Limit (RWL) = 20 lb, and assess the associated lifting risk. |
| | 1.3 | Analyse excavation and trenching safety controls in controlling workplace hazards across operational environments and determine the minimum top width for a 9 ft trench in Type C soil with a required slope ratio of 1.5:1 |
| | 1.4 | Analyse the effectiveness of work-at-height systems and slips, trips, and falls prevention measures in reducing workplace hazards across operational environments. A worker is wearing a safety harness and is connected to an anchor point by a 6-foot shock-absorbing lanyard. The anchor point is level with the worker's D-ring (back attachment). Calculate the following: 1. Free-Fall Distance (FFD) 2. Total Fall Distance (TFD) (using a 3.5 ft shock absorber stretch) 3. Required Clearance (the safe distance needed to the ground) |

| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. Evaluate incident performance indicators, applied physics calculations, statistical measures, and unit conversion techniques in occupational health and safety management | 2.1 | Evaluate lagging indicators in measuring occupational health and safety performance. A construction equipment yard has 150 employees who worked 300,000 hours annually with 9 recordable incidents, 2 lost time incidents, 30 lost days, and \$40,000 direct costs. Calculate the TRIR, LTIR, Severity Rate, and Total Financial Impact assuming indirect costs are three times direct costs |
| | 2.2 | Analyse applied physics calculations in occupational health and safety decision-making. A 10 kg block is pushed across a frictionless surface with a force of 30 N. Calculate acceleration. Additionally, calculate the momentum and frictional stopping force for a 1,000 kg car moving at 20 m/s with a friction coefficient of 0.8 |
| | 2.3 | Evaluate the use of statistical measures in occupational health and safety risk analysis. Using the dataset [10, 14, 10, 18, 12, 16], calculate the Mean, Median, Mode, Range, Variance, Standard Deviation, and Probability that a randomly selected value exceeds 13. |
| | 2.4 | Analyse the importance of accurate unit conversions in occupational health and safety management. Calculate the length in feet of a 400-meter sprint track |
| 3. Implement control systems for electrical, hydraulic, thermal, kinetic, mechanical, and magnetic hazardous energy sources in workplace operations | 3.1 | Analyse the effectiveness of hazardous energy control programs in managing workplace risks, and evaluate the implementation of control measures for electrical, hydraulic, thermal in preventing occupational injuries across operational environments. |
| | 3.2 | Analyse kinetic, mechanical, and magnetic hazardous energy control measures in reducing workplace operational risks and preventing occupational injuries across high-risk environments. |
| | 3.3 | Evaluate the application of Ohm's Law and Watt's Law in controlling occupational hazards. An industrial electrician is working on a 240-volt panel under damp conditions, reducing body resistance to 1,200 Ohms. Calculate the electrical current exposure in milliamperes using Ohm's Law, determine the power exposure using Watt's Law, and assess whether the exposure presents a life-threatening workplace hazard based on standard safety thresholds. |

| | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 3.4 | Analyse electrical calculations in workplace hazard prevention. An industrial AC motor operates on a 240V supply with 40 Ohms resistance and 30 Ohms reactance over 5 continuous hours. Calculate impedance, current, real power, and total energy consumption, and evaluate their significance in workplace electrical safety management |
| | 3.5 | Evaluate circuit safety controls in occupational health and safety management, including the effectiveness of circuit protection systems such as breakers, grounding, overload prevention, and fault isolation in reducing workplace electrical incidents |
| 4. Analyse workplace safety principles related to scaffolding, driver safety controls, compressed gas and specialised hazard control measures across operational environments | 4.1 | Evaluate the effectiveness of machine guarding systems and powered industrial vehicle safety controls in preventing operational workplace incidents |
| | 4.2 | <p>Analyse scaffolding safety controls in reducing high-risk operational hazards and maintaining workplace safety.</p> <p>The Scenario: You need to provide a safe working platform for a masonry team to repair a straight brick wall.</p> <p>The Project Specifications: Wall Dimensions: 20 meters long and 8 meters high. Scaffold Type: Independent Tied Scaffold (double pole). Bay Length: 2.0 meters (horizontal spacing between standards). Lift Height: 2.0 meters (vertical spacing between ledgers). Platform Width: 5 standard scaffold boards wide (approx. 1.1 meters). Duty Rating: Medium Duty (250 kg/m² live load).</p> <p>The Questions to Solve: Standards: How many vertical poles (standards) are required for the full length? Lifts: How many horizontal levels (lifts) are needed to reach the full height? Ledgers: How many 2.0m ledger tubes are needed (assuming 2 rows per lift)? Transoms: How many 1.5m transom tubes are needed to support the boards at each standard? Boards: If only the top level is fully decked, how many 2.0m scaffold boards are required?</p> |
| | 4.3 | Evaluate fleet safety systems, driver safety controls in managing specialised workplace operational risks |

| | | |
|--|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 4.4 | Evaluate pressure vessel safety controls, inspection systems, and hazard prevention measures, compressed gas safety procedures in managing high-risk operational workplace environments. |
|--|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Indicative Content

- Storage capacity in workplace operations, hoisting, rigging and load calculations, slope angle and depth ratio for trenching and excavation, fall protection parameters including free-fall distance, maximum arresting force, force of impact, total fall distance, and clearance (LO1).
- Lagging indicators including incidence rates, lost time, and direct costs of incidents, applied physics calculations including force, acceleration, velocity, momentum, and friction, statistical measures including central tendency, variability, probability, and standard deviation, and unit conversions between metric and imperial units (LO2).
- Hazardous energy control programs for electrical, hydraulic and thermal energy sources, control strategies for kinetic, mechanical and magnetic hazardous energy sources, electrical principles including Ohm's Law and Watt's Law, electrical power, resistance, impedance, and energy systems, and circuit safety principles in workplace environments (LO3).
- Machine guarding and powered industrial vehicle safety controls, scaffolding safety controls, fleet and driver safety controls, pressure vessel safety controls, inspection systems, hazard prevention measures and compressed gas safety procedures (LO4)

Recommended Texts

- HSE's The Health and Safety Toolbox: How to Control Risks at Work, HSE Books (official HSE guidance; generally no ISBN assigned)
- Investigating Accidents and Incidents – A Workbook for Employers, Unions, Safety Representatives and Safety Professionals (HSG245), HSE Books – ISBN: 978-0717661701
- Risk Assessment: A Brief Guide to Controlling Risks in the Workplace (INDG163), HSE Books (official guidance; no standard ISBN)
- Personal Protective Equipment at Work: A Brief Guide (INDG174), HSE Books (official guidance; no standard ISBN)
- Safety Rigging Handbook, W.E. Rossnagel – ISBN: 978-0070539280
- Excavation and Trenching Safety Program Guidelines, OSHA (regulatory guidance; no ISBN assigned)
- Fall Protection in Construction, OSHA Standards and Guidance (regulatory guidance; no ISBN assigned)
- Accident Prevention Manual for Business and Industry: Engineering and Technology, National Safety Council – ISBN: 978-0879122751
- Applied Physics for Occupational Safety and Health (reference-dependent title; ISBN varies by publisher)
- Statistics for Environmental Health and Safety, 2nd Edition, CRC Press – ISBN: 978-1439809501
- Electrical Safety in the Workplace (NFPA 70E Standard) – ISBN: 978-1455922901
- Lockout/Tagout: Control of Hazardous Energy, OSHA Standard 1910.147 (regulatory standard; no ISBN assigned)
- Scaffolding Safety: A Guide to OSHA Standards – ISBN: 978-1593704124
- Powered Industrial Trucks Standard, OSHA (regulatory standard; no ISBN assigned)
- Compressed Gas Handbook, Compressed Gas Association (CGA), 5th Edition – ISBN: 978-0870067440

Unit OHS706: Ergonomics

Unit code: A/652/1364

RQF level: 7

Unit Aim

This unit aims to provide learners with knowledge and practical skills in ergonomic principles, workplace design, ergonomic risk assessment, biomechanical stress analysis, human factors, and human-computer interaction to improve workplace safety, health, and performance across occupational environments

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Apply ergonomic principles to design safe workspaces, evaluate risks, perform safe lifting calculations and prevent musculoskeletal injuries at work.</p> | 1.1 | <p>Analyse the application of manual lift calculations in reducing ergonomic risks. Using the Revised NIOSH Lifting Equation, calculate the Recommended Weight Limit (RWL) and Lifting Index (LI) for the following occupational lifting task:</p> <p>Horizontal Location (H) = 18 inches Vertical Location (V) = 12 inches Vertical Travel Distance (D) = 28 inches Asymmetric angle (A) = 30 degrees Coupling Multiplier (CM) = 0.90 Frequency Multiplier (FM) = 0.80 Load weight (L) = 26 lbs</p> <p>Formula: $RWL = 51(10/H)(1 - 0.0075 V - 30)(0.82 + 1.8/D)(FM)(1 - 0.0032A)(CM)$</p> <p>$LI = L/RWL$</p> <p>Required: 1. Calculate the Recommended Weight Limit (RWL) 2. Calculate the Lifting Index (LI) 3. Evaluate whether the lifting task exceeds recommended ergonomic safety limits</p> |
| | 1.2 | <p>Evaluate ergonomic workspace design principles across office, remote, field, assembly station, and bench or hood occupational environments.</p> |
| | 1.3 | <p>Analyse ergonomic principles in reducing risks associated with manual material handling, and evaluate safe lifting strategies for workplace handling tasks.</p> |
| | 1.4 | <p>Evaluate musculoskeletal disorder risks, including repetitive motion, awkward posture, forced exertion,</p> |

| | | |
|-------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | cumulative trauma disorders, and repetitive strain injuries, in occupational environments, and analyse engineering, administrative, and personal protective ergonomic control strategies for injury prevention. |
| 2. Evaluate ergonomic assessment methodologies, anthropometric principles and ergonomic control strategies | 2.1 | Appraise human physiology, physiological limits, anthropometry, body mechanics, and energy-based work, and apply relevant calculations to determine worker energy requirements. |
| | 2.2 | Evaluate the effectiveness of ergonomic qualitative assessment methods including Rapid Entire Body Assessment (REBA) and Rapid Upper Limb Assessment (RULA). |
| | 2.3 | Quantify the economic, strategic, and operational costs and benefits of ergonomic solutions in reducing workplace hazards, improving worker health, and enhancing organisational performance. |
| | 2.4 | Develop strategies in controlling workplace ergonomic hazards, and assess the effectiveness of ergonomic controls in reducing workplace design and operational safety. |
| 3. Analyse biomechanical stress factors in occupational environments. | 3.1 | Analyse the relationship between muscular system anatomy, muscle group function, and ergonomic performance in workplace environments. |
| | 3.2 | Evaluate the effects of muscle fatigue, repetitive movement, forceful exertion, and biomechanical loading on worker performance and physical strain. |
| 4. Evaluate human factors, human-computer interaction and physiological assessment principles in workplace environments | 4.1 | Evaluate the human factors and human-computer interaction in improving workplace safety, performance, and system usability. |
| | 4.2 | Evaluate the physiological monitoring, eye-tracking technologies, and ethical principles in occupational human factors. |

Indicative Content

- Manual lift calculations using the NIOSH lifting equation, Recommended Weight Limit (RWL), Lifting Index (LI), workspace design, manual material handling, safe lifting techniques, musculoskeletal disorder risks, repetitive motion, awkward posture, forced exertion, cumulative trauma disorders, repetitive strain injuries, and ergonomic injury prevention strategies (LO1).
- Anthropometric assessment methods, physiological limits, body mechanics, postural analysis, energy requirements, ergonomic qualitative analysis methods including REBA and RULA, ergonomic cost-benefit analysis, and ergonomic control strategies for workplace hazard reduction (LO2).
- Muscular system structure, muscle function, muscle fatigue, repetitive movement, forceful exertion, biomechanical loading, and biomechanical stress factors in occupational environments (LO3).
- Human factors principles, human-computer interaction, physiological monitoring, eye-tracking technologies, and ethical considerations in occupational human factors and workplace system usability (LO4).

Recommended Texts

- Ergonomics and Human Factors in Safety Management (general reference title; ISBN varies by edition/publisher)
- Occupational Ergonomics: Principles and Applications, CRC Press – ISBN: 978-0824787325
- NIOSH Applications Manual for the Revised NIOSH Lifting Equation – ISBN: 978-1880754023
- Evaluation of Human Work, 4th Edition, CRC Press – ISBN: 978-1439870402
- Ergonomics: Foundational Principles, Applications and Technologies, CRC Press – ISBN: 978-1498795944
- Rapid Entire Body Assessment (REBA) and Rapid Upper Limb Assessment (RULA) Ergonomic Assessment Tools Guidance (technical guidance tools; generally no ISBN assigned)
- Biomechanics and Motor Control of Human Movement, 4th Edition, Wiley – ISBN: 978-0470398180
- Human Factors Engineering and Ergonomics: A Systems Approach – ISBN: 978-1118131350
- Human-Computer Interaction: Designing for Diverse Users and Domains – ISBN: 978-0128018170
- Occupational Biomechanics, 4th Edition, Wiley – ISBN: 978-0471723431
- Applied Ergonomics Handbook, McGraw-Hill – ISBN: 978-0071763417
- Workplace Ergonomics: Preventing Musculoskeletal Disorders, OSHA Guidelines (regulatory guidance; no ISBN assigned)

Unit OHS707: Industrial Hygiene and Occupational Health

Unit code: D/652/1365

RQF level: 7

Unit Aim

This unit aims to provide learners with knowledge and practical skills in industrial hygiene and occupational health by developing competence in exposure calculations, chemical hazard management, occupational exposure assessment, biological hazard prevention, toxicology, radiation safety, and workplace health protection systems across occupational environments.

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|-------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Analyse flow rate calculations, noise hazard assessment, and radiation exposure controls in occupational health management | 1.1 | <p>Analyse the application of flow rate calculations in controlling workplace exposure risks. Using the following industrial system scenario, calculate hydraulic flow rate, pneumatic SCFM, and ventilation requirements.</p> <p>Hydraulic (The Power): The station uses a hydraulic ram to press parts. The pump has a displacement of 60 cc/rev and is driven by a motor at 1,500 RPM. Task: Calculate the flow rate in L/min.</p> <p>Pneumatic (The Cooling/Cleaning): A pneumatic nozzle blows air to clear metal shavings. It uses 2 cubic feet of air per minute (CFM) at a working pressure of 100 PSIG. Task: Convert this to SCFM (Standard Cubic Feet per Minute).</p> <p>Ventilation (The Safety): To remove fumes, the station's enclosure (100 sq. ft.) requires air changes. It is designed for 2 operators working nearby. Use the standard rates: 0.18 CFM/sq. ft. and 10 CFM/person. Task: Calculate the total ventilation flow in CFM(Cubic Feet per Minute).</p> |
| | 1.2 | <p>Evaluate the effectiveness of noise hazard calculations in controlling occupational hearing risks. A warehouse logistics operator is exposed to multiple machinery noise sources during a 10-hour extended work shift. Using the occupational noise dose formula provided and a regulatory threshold of 85 dBA, calculate the worker's total cumulative noise exposure, determine whether exposure exceeds permissible occupational safety thresholds, assess dual machinery exposure risks, calculate the minimum required hearing protection Noise Reduction Rating (NRR) for compliance, and recommend suitable workplace noise control measures.</p> |

| | | |
|----------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 1.3 | <p>Analyse radiation exposure calculations in protecting workers from physical hazards. A radiological maintenance supervisor is reviewing safety controls for handling an industrial cobalt-60 source during routine equipment transfer. The current handling tool is 12 cm long, and the source produces an operator exposure rate of 0.8 Sv/h. To improve worker safety, the organisation plans to increase handling distance and introduce tungsten shielding.</p> <p>Given: Original handling tool length = 12 cm Initial dose rate = 0.8 Sv/h Desired exposure reduction = 80% Tungsten shielding provides an additional 60% dose reduction in the remaining dose.</p> <p>Required: Calculate the new handling tool length required using the inverse square law to achieve an 80% reduction in radiation exposure.</p> <p>Determine the final worker dose rate after applying both increased distance and shielding controls.</p> <p>Evaluate the effectiveness of combined engineering controls in reducing occupational radiation hazards</p> |
| 2. Evaluate chemical hazard classification systems and applied chemistry principles in | 2.1 | Evaluate the effectiveness of the Globally Harmonized System in controlling workplace chemical hazards |

| | | |
|--------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| occupational environments | 2.2 | <p>Analyse the importance of chemistry principles in identifying and controlling occupational chemical hazards using the following industrial chemical storage scenario.</p> <p>Scenario: A facility stores 1,000 L of 0.5 M Hydrochloric Acid (HCl) and 1,000 L of 0.5 M Sodium Hydroxide (NaOH). A safety engineer must assess the risks of a potential spill and the stability of the storage environment.</p> <p>The Tasks:</p> <p>1. Classification & Nomenclature</p> <ul style="list-style-type: none"> • Provide the IUPAC name for both chemicals. • Classify each based on its GHS (Globally Harmonized System) hazard category (e.g., Corrosive, Toxic, or Irritant). <p>2. pH Level Calculation (The Before)</p> <ul style="list-style-type: none"> • Calculate the initial pH of the 0.5 M HCl solution. • Calculate the initial pH of the 0.5 M NaOH solution. <p>3. Neutralization & Reaction Analysis (The After)</p> <ul style="list-style-type: none"> • Write the balanced chemical equation for the reaction if these two chemicals are mixed. • The Calculation: If 100 L of the 0.5 M HCl is accidentally mixed with 100 L of the 0.5 M NaOH, calculate the final pH of the resulting mixture. <p>4. Ideal Gas Law (Storage Pressure)</p> <ul style="list-style-type: none"> • A 50 L pressurized tank contains 2 moles of Hydrogen Chloride gas. • The Calculation: If the warehouse temperature rises from 20°C to 45°C during a cooling system failure, calculate the change in internal pressure (ΔP) in atmospheres (atm). • Use the Ideal Gas Law formula: $P_1V_1/T_1 = P_2V_2/T_2$ <p>5. Hazard Controls</p> <ul style="list-style-type: none"> • Based on your pH and pressure results, recommend three specific controls following the Hierarchy of Controls (Engineering, Administrative, and PPE). |
| 3. Analyse occupational exposure pathways to hazardous substances, associated human health impacts, and exposure control | 3.1 | Analyse the relationship between human anatomy, physiology, and occupational exposure risks associated with hazardous substances in workplace environments. |

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| principles in workplace environments | 3.2 | <p>Evaluate the effectiveness of occupational exposure limits, including Short-Term Exposure Limits (STEL), Time-Weighted Average (TWA), Immediately Dangerous to Life or Health (IDLH) values, and Ceiling exposure limits, in protecting worker health from hazardous substance exposure.</p> <p>Air monitoring was conducted during a metal surface treatment operation involving airborne manganese particulates. Using the concentration data below, calculate the worker's 8-hour Time-Weighted Average (TWA), and evaluate whether the exposure level may require further comparison against applicable occupational exposure standards and additional workplace controls.</p> <p>Air Sampling Data:</p> <ul style="list-style-type: none"> • 0.00040 mg/m³ for 2.5 hours • 0.00320 mg/m³ for 1.0 hour • 0.00015 mg/m³ for 2.0 hours • 0.00060 mg/m³ for 2.5 hours <p>Formula:</p> $TWA = (C_1T_1 + C_2T_2 + C_3T_3 + \dots + C_nT_n) / (T_1 + T_2 + T_3 + \dots + T_n)$ <p>Required:</p> <ol style="list-style-type: none"> 1. Calculate the 8-hour Time-Weighted Average (TWA) exposure 2. Evaluate the significance of cumulative airborne hazardous substance exposure 3. Determine whether additional occupational exposure assessments such as STEL, IDLH, or Ceiling limits should be considered 4. Recommend suitable occupational exposure control measures |
| | 3.3 | Analyse how hazardous substance exposure pathways and exposure duration influence occupational health outcomes in workplace environments. |
| | 3.4 | Evaluate how acute and chronic exposure durations affect occupational health outcomes and worker protection strategies |
| 4. Evaluate biological hazards, pathogen control, ionising radiation, occupational toxicology, and waste management in occupational health management. | 4.1 | Analyse the effectiveness of universal precautions in controlling bloodborne, viral, and bacterial hazards, and evaluate pathogen prevention strategies under occupational exposure scenarios. |

| | | |
|--|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 4.2 | <p>Evaluate the application of ionizing radiation principles in managing occupational exposure risks. Using the following industrial radiography scenario, calculate the total radiation dose received by a technician after accounting for radioactive decay, half-life, inverse square law, shielding attenuation, and exposure duration.</p> <p>A radiography team is using an Iridium-192 source to inspect pipe welds.</p> <p>The Source (Strength & Decay): The source had an activity of 100 Curies (Ci) when it was calibrated 74 days ago. (Note: The half-life of Ir-192 is 74 days).</p> <p>The Distance (Inverse Square Law): At 1 meter, a 100 Ci Ir-192 source produces a dose rate of 48 R/hr. The technician is working at a distance of 4 meters from the source.</p> <p>The Shielding: The technician is standing behind a lead wall that is 2.6 cm thick. (Note: The Half-Value Layer (HVL) of lead for Ir-192 is 1.3 cm).</p> <p>The Time: The technician needs to stay in that position for 3 hours to complete the safety monitoring.</p> |
| | 4.3 | Apply insights into occupational toxicology and evaluate different advanced exposure assessment methods |
| | 4.4 | Analyse the importance of waste management practices in reducing occupational health risks, and evaluate waste classification, treatment, labeling, certification, and disposal control measures in workplace environments. |

Indicative Content

- Flow rate calculations including ventilation, hydraulic, and pneumatic systems, noise hazard calculations including time-weighted average, dual machinery exposure, noise reduction rates, and radiation exposure calculations including shielding, half-life, and dosage (LO1).
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), chemistry concepts including classification, composition, nomenclature, neutralization, reactions, ideal gas law, pH levels, and chemical hazard control principles (LO2).
- Human anatomy and physiology in relation to occupational exposure risks, occupational exposure limits including STEL, TWA, IDLH, Ceiling limits, routes of entry for hazardous substances, and acute and chronic exposure durations (LO3).

- Universal precautions for pathogen control, bloodborne, viral, and bacterial hazards, ionising radiation principles including radioactive decay, half-life, source strength, shielding, occupational toxicology principles, exposure assessment methods, waste classification, removal, treatment, labelling, certification, and disposal control measures (LO4).

Recommended Texts

- Industrial Hygiene and Occupational Health Management (general occupational hygiene references; title variations exist, ISBN depends on edition/publisher)
- Fundamentals of Industrial Hygiene, 6th Edition, National Safety Council – ISBN: 978-0879123345
- Patty's Industrial Hygiene and Toxicology, 6th Edition – ISBN: 978-0471272458
- Occupational Exposure Assessment for Air Contaminants, CRC Press – ISBN: 978-1566705462
- OSHA Industrial Ventilation Guidelines (technical/regulatory guidance; no ISBN assigned)
- Noise and Hearing Conservation Manual, 5th Edition, CAOHC – ISBN: 978-0978773700
- Radiation Protection and Dosimetry: An Introduction to Health Physics, 4th Edition – ISBN: 978-3642023743
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), United Nations – ISBN: 978-9211172560
- Occupational Toxicology, 2nd Edition, CRC Press – ISBN: 978-0849327858
- Biological and Environmental Hazards, Risks, and Disasters, 1st Edition, Elsevier – ISBN: 978-0123964717
- Physical and Biological Hazards of the Workplace, 3rd Edition, Wiley – ISBN: 978-1118928608
- Hazardous Waste Management and Occupational Safety Guidelines (reference-dependent; many regulatory guides do not carry ISBNs)
- Principles of Occupational Health and Hygiene: An Introduction, WHO / ILO references (many editions may not have standard ISBN)
- Occupational Health Practice, 4th Edition, Wiley – ISBN: 978-1405189729

Unit OHS708: Fire Safety

Unit code: F/652/1366

RQF level: 7

Unit Aim

This unit aims to provide learners with knowledge and practical skills in fire safety management by developing competence in fire science, fire hazard identification, combustible and electrical fire risks, fire detection and suppression systems, firefighting strategies, fire prevention controls, and workplace fire safety management across occupational environments

Learning Outcomes, Assessment Criteria

| Learning Outcomes: When awarded credit for this unit, a learner will be able to: | | Assessment Criteria: Assessment of this learning outcome will require a learner to demonstrate that they can: |
|---------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Analyse fire science principles, electrical fire risks, and fire assessment methods in occupational environments. | 1.1 | Appraise the fire science principles and fire classification, pentagon and tetrahedron, flammability limits in workplace fire prevention. |
| | 1.2 | Analyse the impact of electrostatic discharge, overcurrent protection and arc flash risks, on workplace fire prevention. |
| | 1.3 | Evaluate the ground fault circuit interrupters, grounding, bonding systems, and hazardous area classifications, in preventing workplace fire incidents. |
| | 1.4 | <p>Evaluate the application of fire measurement and calculation methods in workplace fire assessment. Using the given scenario, calculate the Fire Load Density and assess its significance in determining workplace fire hazard severity.</p> <p>Scenario: You have a small storage room. You required to find the Fire Load Density to see if the room is "High Risk."</p> <p>Data (The Facts)</p> <ul style="list-style-type: none"> • Room Size: 100 square meters • Material Inside: 20,000 kg of wood • Energy Value: 18.5 MJ per kg |
| 2. Analyse hot work hazards, flammable and combustible substance hazards, and combustible dust ignition risks in workplace operations | 2.1 | Analyse the impact of hot work operations on workplace fire risks and evaluate hazard control measures for high-risk thermal work environments. |
| | 2.2 | Evaluate flammable substance hazards, combustible dust ignition risks, conflagration hazards, and ignition sources in occupational environments. |

| | | |
|----------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 2.3 | Analyse the chemical and physical properties, handling, storage, and compatibility of combustible materials in workplace fire prevention. |
| 3. Evaluate fire detection, suppression, firefighting, and smoke control systems in occupational environments. | 3.1 | Evaluate the effectiveness of fire detection systems in identifying and responding to workplace fire emergencies. |
| | 3.2 | Analyse the effectiveness of fire suppression system types, including water-based, foam, carbon dioxide (CO ₂), dry chemical, and clean agent systems, in controlling workplace fire incidents and evaluate their suitability across occupational environments. |
| | 3.3 | Analyse the selection, use, suitability, and compliance requirements of fire extinguisher types across workplace fire scenarios. |
| | 3.4 | Evaluate workplace firefighting strategies and firefighter safety considerations in responding to fire incidents across occupational environments. |
| | 3.5 | Evaluate the effectiveness of smoke detection, smoke control, ventilation, and pressurization measures in workplace fire safety. |
| 4. Evaluate fire prevention, segregation, housekeeping, and building safety in workplace environments | 4.1 | Evaluate the effectiveness of segregation, separation, storage, and ventilation controls in reducing workplace fire risks. |
| | 4.2 | Evaluate housekeeping standards and workplace maintenance practices in contributing to workplace fire prevention. |
| | 4.3 | Evaluate fire prevention signs and labels in improving workplace fire safety awareness and hazard communication. |
| | 4.4 | Analyse legal and regulatory requirements in workplace fire prevention and control. |
| | 4.5 | Critically Analyse building construction fire safety, firefighter safety principles, fire codes, and code inspection requirements in workplace fire protection. |

Indicative Content

- Fire science principles including fire classification, fire pentagon, fire tetrahedron, flammability limits, electrical fire hazards, electrostatic discharge, overcurrent protection, arc flash risks, electrical hazard controls, grounding, bonding, hazardous area classifications, fire measurement, heat release rate, heat flux, temperature analysis, and fire load calculations (LO1).
- Hot work hazards, flammable substance hazards, combustible dust ignition risks, conflagration hazards, ignition sources, combustible material properties, chemical and physical properties, handling, storage, and compatibility (LO2).
- Fire detection systems including conventional, addressable, and intelligent systems, fire suppression systems including water-based, foam, CO₂, dry chemical, and clean agent systems, portable fire extinguisher types, workplace firefighting strategies, firefighter safety, smoke detection systems, smoke control methods, ventilation, and pressurization measures (LO3).

- Fire prevention principles including segregation, separation, storage, ventilation controls, housekeeping standards, workplace maintenance, fire prevention signs and labels, legal and regulatory requirements, building construction fire safety, firefighter safety principles, fire codes, and code inspection requirements (LO4).

Recommended Texts

- Fire Safety Risk Assessment Guides – HM Government / HSE (official guidance documents; generally no ISBN assigned for individual workplace guides)
- SFPE Handbook of Fire Protection Engineering, 5th Edition – ISBN: 978-1493925643
- Fundamentals of Fire Phenomena, 2nd Edition – ISBN: 978-1498735643
- NFPA Fire Protection Handbook, 21st Edition – ISBN: 978-1455928828
- Electrical Safety in the Workplace (NFPA 70E Handbook) – ISBN: 978-1455922901
- OSHA Fire Protection and Prevention Standards (regulatory standards; no ISBN assigned)
- Dust Explosions in the Process Industries, 3rd Edition – ISBN: 978-0128147009
- Industrial Fire Prevention Handbook – ISBN: 978-0071345972
- Fire Detection and Alarm Systems (BS 5839 Guidance) – ISBN: 978-1119967880
- Portable Fire Extinguishers: Principles and Practice (NFPA 10 reference) – ISBN: 978-0877657590
- Building Construction for the Fire Service, 6th Edition – ISBN: 978-0134874029
- International Fire Code (IFC), latest edition – ISBN: 978-1609839611
- Fire Safety Management Handbook – ISBN: 978-0750680684
- Principles of Fire Prevention, Inspection, and Code Enforcement – ISBN: 978-1284041989