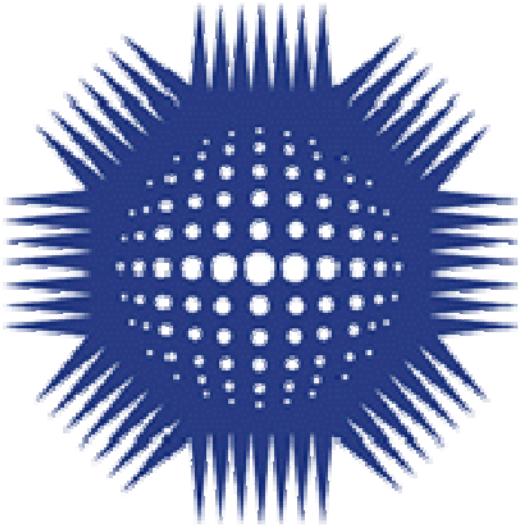

Syllabus summary - NEBOSH International Diploma in Occupational Health and Safety

August 2011

Syllabus summary - NEBOSH International Diploma in Occupational Health and Safety (August 2011 specification)

Structure

The qualification is divided into four units: Unit A (Managing health and Safety), unit B (Hazardous agents in the workplace), Unit C (Workplace and work equipment safety hazards) and Unit D (Application of health and safety theory and practice).

Unit IA: International Management of health and safety

Element Number	Element Title	Recommended hours	Page
1	Principles of health and safety management	8	5
2	Loss causation and incident investigation	5	6
3	Measuring and reviewing health and safety performance	6	6
4	Identifying hazards, assessing and evaluating risk	12	7
5	Risk control	8	7
6	Organisational factors	12	8
7	Human factors	12	9
8	Regulating health and safety	16	10
	Minimum unit tuition time	**91**	
	Recommended private study time	**75**	

Unit IB: International control of hazardous agents in the workplace

Element Number	Element Title	Recommended hours	
1	Principles of toxicology and epidemiology	8	12
2	Hazardous substances and other chemicals – assessment of risk	5	13
3	Hazardous substances and other chemicals – engineering controls and personal protective equipment	4	13
4	Monitoring and measuring	6	14
5	Biological agents	7	14
6	Physical agents 1 – noise and vibration	10	15
7	Physical agents 2 - radiation	9	15
8	Psychosocial agents	5	16
9	Musculoskeletal risks and controls	4	16
10	Work environment risks and controls	5	17
11	Managing occupational health	8	17
	Minimum unit tuition time	**71**	
	Recommended private study time	**50**	

Unit IC: International workplace and work equipment safety

Unit ID: International application of health and safety theory and practice

Element Number	Element Title	Recommended hours	Page
1	Application of health and safety theory and practice	6	25
	Minimum unit tuition time	**6**	
	Recommended private study time	**50**	
	Minimum total tuition time	***231***	
	Recommended total private study time	***225***	
	Total overall hours	***456***	

Unit IA: International management of health and safety

Overall learning outcome

On completion of this unit, candidates will be able to demonstrate their understanding of the domain knowledge covered through:

1. The application of knowledge to familiar and unfamiliar situations; and

2. The critical analysis and evaluation of information presented in both quantitative and qualitative forms.

In addition each element has specific learning outcomes.

Element A1: Principles of health and safety management

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA1.1 Explain the moral, legal and economic reasons for a health and safety management system

IA1.2 Outline the societal factors which influence health and safety standards and priorities

IA1.3 Explain the principles and content of effective health and safety, quality, environmental, and integrated management systems with reference to recognised models and standards

IA1.4 Outline the role and responsibilities of the health and safety practitioner.

Recommended tuition time not less than 8 hours

Element IA2: Loss causation and incident investigation

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA2.1 Explain the theories of loss causation

IA2.2 Explain the quantitative analysis of accident/incident and ill health data, limitations of their application, and their presentation in numerical and graphical form

IA2.3 Explain the external and the internal reporting and recording systems for loss events (injuries, ill-health, dangerous occurrences) and near-misses

IA2.4 Explain loss and near miss investigations; the requirements, benefits, the procedures, the documentation, and the involvement of and communication with relevant staff and representatives.

Recommended tuition time not less than 5 hours

Element IA3: Measuring and reviewing health and safety performance

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA3.1 Explain the purpose of performance measurement in relation to health and safety objectives and arrangements

IA3.2 Explain the need for, and the objectives and limitations of, health and safety monitoring systems

IA3.3 Describe the variety of monitoring and measurement techniques

IA3.4 Explain the requirements for reviewing health and safety performance

Recommended tuition time not less than 6 hours

Element IA4: Identifying hazards, assessing and evaluating risks

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA4.1 Describe how to use internal and external sources of information in the identification of hazards and the assessment of risk

IA4.2 Outline a range of hazard identification techniques

IA4.3 Explain how to assess and evaluate risk and to implement a risk assessment programme

IA4.4 Explain the principles and techniques of failure tracing methodologies with the use of calculations.

Recommended tuition time not less than 12 hours

Element A5: Risk Control

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA5.1 Outline common risk management strategies

IA5.2 Outline factors to be taken into account when selecting risk controls

IA5.3 Explain the development, main features and operation of safe systems of work and permit-to-work systems.

Recommended tuition time not less than 8 hours

Element IA6: Organisational factors

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA6.1 Explain the internal and external influences on health and safety in an organisation

IA6.2 Outline the different types of organisation, their structure, function and the concept of the organisation as a system

IA6.3 Identify the various categories of third parties in a workplace, the relevant duties, responsibilities and controls

IA6.4 Explain the role, influences on and procedures for formal and informal consultation with workers in the workplace

IA6.5 Outline the development of a health and safety management information system, the relevant duties and the data it should contain

IA6.6 Explain health and safety culture and climate

IA6.7 Outline the factors which can both positively and negatively affect health and safety culture and climate.

Recommended tuition time not less than 12 hours

Element IA7: Human factors

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA7.1 Outline psychological and sociological factors which may give rise to specific patterns of safe and unsafe behaviour in the working environment

IA7.2 Explain the nature of the perception of risk and its relationship to performance in the workplace

IA7.3 Explain the classification of human failure

IA7.4 Explain appropriate methods of improving individual human reliability in the workplace

IA7.5 Explain how organisational factors could contribute to improving human reliability

IA7.6 Explain how job factors could contribute to improving human reliability

IA7.7 Outline the principles, conditions and typical content of behavioural change programmes designed to improve safe behaviour in the workplace.

Recommended tuition time not less than 12 hours

Element IA8: Regulating health and safety

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IA8.1 Describe comparative governmental and socio-legal, regulatory and corporate models

IA8.2 Explain the role and limitations of the International Labour Organisation in a global health and safety setting

IA8.3 Explain the role non-governmental bodies and self-regulation has in securing common health and safety standards in a global economy.

Recommended tuition time not less than 16 hours

Unit IB: International control of hazardous agents in the workplace

Overall learning outcome

On completion of this unit, candidates should be able to demonstrate understanding of the domain knowledge covered through:

1. The application of knowledge to familiar and unfamiliar situations; and

2. The critical analysis and evaluation of information presented in both quantitative and qualitative forms.

In addition each element has specific learning outcomes.

Element IB1: Principles of toxicology and epidemiology

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quant:

IB1.1 Outline the principles of control of chemicals

IB1.2 Outline human anatomical systems and sensory organs

IB1.3 Describe the main effects and routes of attack of chemicals on the human body

IB1.4 Explain the health effects of chemicals used in the workplace

IB1.5 Explain the principles of epidemiology and the principles of deriving and applying toxicological data to the identification of work related ill-health.

Recommended tuition time not less than 8 hours

Element IB2: Hazardous substances and other chemicals – assessment of risk

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB2.1 Outline the factors to consider when assessing risks from chemicals which are hazardous to health

IB2.2 Explain elimination of risk or control measures for chemicals which are hazardous to health

IB2.3 Explain the specific requirements for asbestos.

Recommended tuition time not less than 5 hours

Element IB3: Hazardous substances and other chemicals – engineering controls and personal protective equipment

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB3.1 Explain the purpose and operation of local exhaust ventilation and dilution ventilation including assessing and maintaining effectiveness

IB3.2 Explain the various types of personal protective equipment (PPE) available for use with hazardous chemicals, their effectiveness, and the factors to consider in their selection.

Recommended tuition time not less than 5 hours

Element IB4: Monitoring and measuring

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB4.1 Explain occupational exposure limits for airborne harmful substances, the basis upon which they are established, and their application to the workplace

IB4.2 Outline the strategies, methods, and equipment for the sampling and measurement of airborne harmful substances

IB4.3 Outline the principles of biological monitoring.

Recommended tuition time not less than 6 hours

Element IB5: Biological agents

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB5.1 Explain the types and properties of biological agents found at work

IB5.2 Explain the assessment and control of risk from exposure to biological agents at work.

Recommended tuition time not less than 7 hours

Element IB6: Physical agents 1 – noise and vibration

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB6.1 Explain the basic physical concepts relevant to noise

IB6.2 Explain the effects of noise on the individual and the use of audiometry

IB6.3 Explain the measurement and assessment of noise exposure

IB6.4 Explain the principles of controlling noise and noise exposure

IB6.5 Explain the basic physical concepts relevant to vibration

IB6.6 Explain the effects of vibration on the individual

IB6.7 Explain the measurement and assessment of vibration exposure

IB6.8 Explain the principles of controlling vibration and vibration exposure.

Recommended tuition time not less than 10 hours

Element IB7: Physical agents 2 – radiation

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB7.1 Outline the nature of the different types of ionising and non-ionising radiation

IB7.2 Explain the effects of exposure to non-ionising radiation, its assessment and control, including for the special case of optical lasers

IB7.3 Explain the effects of exposure to ionising radiation, its measurement and control.

Recommended tuition time not less than 9 hours

Element IB8: Psychosocial agents

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

B8.1 Explain the scope, effects and causes of work-related stress

B8.2 Explain the identification and control of workplace stress with reference to legal duties and other standards

B8.3 Explain the scope, effects and causes of work-related violence/aggression

B8.4 Explain the identification and control of work-related violence/aggression with reference to legal duties.

Recommended tuition time not less than 5 hours

Element IB9: Musculoskeletal risks and controls

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB9.1 Outline types, causes and relevant workplace examples of injuries and ill-health conditions associated with repetitive physical activities, manual handling and poor posture

IB9.2 Explain the assessment and control of risks from repetitive activities, manual handling and poor posture.

Recommended tuition time not less than 4 hours

Element IB10: Work environment risks and controls

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB10.1 Explain the need for, and factors involved in, the provision and maintenance of thermal comfort in the work environment

IB10.2 Explain the need for adequate and appropriate lighting in the workplace, units of measurement of light and the assessment of lighting levels in the workplace

IB10.3 Explain the need for welfare facilities and arrangements in fixed and temporary workplaces

IB10.4 Explain the provision for first aid in the workplace.

Recommended tuition time not less than 5 hours

Element IB11: Managing occupational health

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IB11.1 Outline the nature of occupational health

IB11.2 Outline the principles and benefits of vocational rehabilitation including the role of outside support agencies

IB11.3 Outline the management of occupational health (including the practical and legal aspects).

Recommended tuition time not less than 8 hours

Unit IC: International workplace and work equipment safety

Overall Learning Outcome

On completion of this unit, candidates should be able to demonstrate understanding of the domain knowledge covered through:

1. The application of knowledge to familiar and unfamiliar situations; and

2. The critical analysis and evaluation of information presented in both quantitative and qualitative forms.

In addition each element has specific learning outcomes.

Element IC1: General workplace issues

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC1.1 Explain the need for, and factors involved in, the provision and maintenance of a safe working environment, with specific reference to access and egress, pedestrians, and slips, trips and falls

IC1.2 Explain how safety signs are used in the workplace

IC1.3 Explain the assessment of risk and safe working practices associated with work in confined spaces

IC1.4 Outline the main issues associated with maintaining structural safety of workplaces

IC1.5 Explain the hazards, risks, and controls when working at heights

IC1.6 Explain the hazards, risks and controls for lone working.

Recommended tuition time not less than 7 hours

Element IC2: Principles of fire and explosion

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC2.1 Outline the properties of flammable and explosive materials and the mechanisms by which they ignite

IC2.2 Outline the behaviour of structural materials, buildings and building contents in a fire

IC2.3 Outline the main principles and practices of fire and explosion prevention and protection

IC2.4 Outline the contribution of typical mechanical and systems failures to major accidents.

Recommended tuition time not less than 6 hours

Element IC3: Workplace fire risk assessment

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC3.1 Explain the processes involved in the identification of hazards and the assessment of risk from fire

IC3.2 Describe common fire detection and alarm systems and procedures

IC3.3 Outline the factors to be considered when selecting fixed and portable fire-fighting equipment for the various types of fire

IC3.4 Outline the factors to be considered in the provision and maintenance of means of escape

IC3.5 Explain the purpose of, and essential requirements for, emergency evacuation procedures.

Recommended tuition time not less than 6 hours

Element IC4: Storage, handling and processing of dangerous substances

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC4.1 Outline the main physical and chemical characteristics of industrial chemical processes

IC4.2 Outline the main principles of the safe storage, handling and transport of dangerous substances

IC4.3 Outline the main principles of the design and use of electrical systems and equipment in adverse or hazardous environments

IC4.4 Explain the need for emergency planning, the typical organisational arrangements needed for emergencies.

Recommended tuition time not less than 7 hours

Element IC5: Work equipment (general)

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC5.1 Outline the criterion for the selection of suitable work equipment for particular tasks and processes to eliminate or reduce risks

IC5.2 Explain how risks to health and safety arising from the use of work equipment are controlled

IC5.3 Explain safe working procedures for the maintenance, inspection and testing of work equipment according to the risks posed

IC5.4 Explain the role of competence, training, information and supervision in the control of risks arising from the installation, operation, maintenance and use of work equipment.

Recommended tuition time not less than 9 hours

Element IC6: Work equipment (workplace machinery)

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC6.1 Describe the principles of safety integration and the considerations required in a general workplace machinery risk assessment

IC6.2 Describe, with examples, the principal generic mechanical and non-mechanical hazards of general workplace machinery

IC6.3 Describe protective devices found on general workplace machinery

IC6.4 Explain the principles of control associated with the maintenance of general workplace machinery

IC6.5 Describe the requirements for information and warnings on general workplace machinery

IC6.6 Explain the key safety characteristics of general workplace machinery control systems

IC6.7 Explain the analysis, assessment and improvement of system failures and system reliability with the use of calculations.

Recommended tuition time not less than 11 hours

Element IC7: Work equipment (mobile, lifting and access)

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC7.1 Describe the main hazards and control measures associated with commonly encountered mobile work equipment

IC7.2 Describe the main hazards and control measures associated with commonly encountered lifting equipment

IC7.3 Describe the main hazards and control measures associated with commonly encountered access equipment and equipment for working at height.

Recommended tuition time not less than 6 hours

Element C8: Electrical safety

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC8.1 Outline the basic principles of electricity

IC8.2 Outline the dangers of electricity

IC8.3 Outline the issues relevant to the installation, use, inspection and maintenance of electrical systems

IC8.4 Outline the main principles for safe working in the vicinity of high voltage systems

IC8.5 Outline the main hazards, risks and controls associated with the use of portable electrical equipment.

Recommended tuition time not less than 7 hours

Element IC9: Construction hazards and controls

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC9.1 Describe the scope and nature of construction activities

IC9.2 Outline the principle duties and specific responsibilities for the effective management of health and safety on construction sites

IC9.3 Explain the hazards associated with working at heights from fixed work or temporary platforms and the necessary precautions and safe working practices

IC9.4 Explain the hazards, precautions and safe working practices associated with demolition work

IC9.5 Explain the hazards associated with excavation work and the necessary precautions and safe working practices.

Recommended tuition time not less than 7 hours

Element IC10: Workplace transport and driving for work

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC10.1 Explain the hazards, risks and control measures for safe workplace transport operations

IC10.2 Outline the factors associated with driving at work that increase the risk of an incident and the control measures to reduce work-related driving risks.

Recommended tuition time not less than 4 hours

Element C11: Pressure system hazards and controls

Learning outcomes

On completion of this element, candidates should be able to demonstrate understanding of the content through the application of knowledge to familiar and unfamiliar situations and the critical analysis and evaluation of information presented in both quantitative and qualitative forms. In particular they should be able to:

IC11.1 Outline the principles of operation of liquefied gas storage; refrigeration systems; and heating systems

IC11.2 Outline the key features and safety requirements for 'simple' unfired pressure systems

IC11.3 Outline the key features and safety requirements for process pressure systems

IC11.4 Outline, the likely causes of the failure of pressure systems, and the testing and prevention strategies that can be used.

Recommended tuition time not less than 5 hours

Unit ID: International application of health and safety theory and practice

Learning outcomes

On completion of this element, candidates should be able to:

- Demonstrate the ability to apply the knowledge and understanding gained from their studies of elements of Units IA, IB and IC in a practical environment
- Carry out a detailed review of the health and safety performance of a workplace or organisation
- Critically analyse and evaluate information gathered during the review
- Produce a justified action plan to improve performance.

This unit contains no additional syllabus content. However, completion of study for units IA, IB and IC is recommended in order to undertake the Unit ID assignment.

Further detailed information regarding Unit ID including forms and mark schemes can be found in a separate guidance document for candidates and accredited .course providers available from the NEBOSH website (www.nebosh.org.uk).

Unit assessment summary

Units IA, IB and IC are each assessed by one three-hour examination. Candidate scripts are marked by external examiners appointed by NEBOSH.

Unit ID is assessed via a workplace-based written assignment of around 8,000 words. Assignments are marked by external examiners appointed by NEBOSH.

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