

NEBOSH Internatational General Certificate in Occupational Health and Safety - Lesson plan (sample)

Element 6: Musculoskeletal Health (Tuition Time: 6 hours)

Approx. timing	Content and tutor activity	Training intent	Aids and equipment	Learner activity
5 minutes	Introduce scope of Element 6 6.1 Work-related upper limb disorders 6.2 Manual Handling 6.3 Load Handling Equipment	To introduce element.	Slides	Active listening
6.1.1 Meaning of musculoskeletal disorders and WRULDs				
10 minutes	Tutor to discuss the meaning of musculoskeletal disorders and ergonomics.	To begin the learning process of why it is important to follow good ergonomic principles.	Slides	Active listening
6.1.2 Possible ill-health conditions from poorly designed tasks and workstations				
15 minutes	Tutor to discuss the ill-health effects that can occur if good ergonomic principles are not followed. Tutor to discuss some of the factors to consider in an ergonomic risk assessment classifying these into three groups: <ul style="list-style-type: none"> • Work equipment and work procedure; • The working environment; and • The workers themselves. 	To understand the ill-health effects that can occur if good ergonomic principles are not followed. To understand the components of an ergonomic risk assessment.	Slides	Active listening
20 minutes	Activity (Group discussion/structured debate) Using the scenario from the slide, Learners to consider measures they would recommend that might reduce the risk of finger pain and eye strain. Groups/pairs to feedback to tutor; tutor collates responses on whiteboard/flipchart. Tutor to discuss the appropriate measures.	To reflect on appropriate measures to reduce the risk of ill-health effects.	Slides Whiteboard/flipchart.	Participate in group discussion/structured debate Feedback to tutor Active Listening

Approx. timing	Content and tutor activity	Training intent	Aids and equipment	Learner activity
15 minutes	<p>Activity (Individual then group discussion) Using the scenario from the slide, Learners to consider where a similar adjustment may be helpful in their own workplace.</p> <p>Individuals feedback to tutor.</p> <p>Tutor facilitates discussion.</p>	To recognise where changes could be made to improve ergonomics within their own workplace.	Slides	<p>Own reflection</p> <p>Feedback to tutor</p> <p>Active listening</p>
15 minutes	<p>Tutor explains the meaning of WRULDs.</p> <p>Tutor discusses the effects of WRULDs, and possible causes.</p> <p>Tutor to show HSE videoclip: <i>Workplace activities - MSDs - Go Home Healthy</i> https://youtu.be/oowD2hLn1v8</p>	To understand the meaning, causes and effects WRULDs.	Slides YouTube clip	Active listening
6.1.3 Avoiding/minimising risks from poorly designed tasks and workstations				
15 minutes	Tutor to explain the variety of control measures that could be used to minimise WRULDs.	To understand the variety of control measures that could be used to minimise WRULDs.	Slides	Active Listening
15 minutes	<p>Tutor to review the hazards and risks associated with DSE and what to look for in a DSE risk assessment.</p> <p>Tutor to discuss an appropriate DSE set up.</p>	To understand the hazards and risks associated with DSE and what to look for in a DSE risk assessment	Slides	Active listening
10 minutes	<p>Tutor to show HSE videoclip <i>Workstation set up at home and in the office - good posture</i> https://youtu.be/liaBs1-Zz3I</p> <p>Tutor to illustrate what to look for when carrying out a DSE risk assessment.</p>	To reinforce understanding of the hazards and risks associated with DSE and what to look for in a DSE risk assessment	Slides YouTube clip	Active listening

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15 minutes	<p>Activity (Group discussion/structured debate) Using the scenario from the slide, learners consider why the worker may be suffering from neck pain resulting from the DSE work.</p> <p>Groups/pairs to feedback to tutor; tutor collates responses on whiteboard/flipchart.</p> <p>Tutor to discuss the appropriate measures.</p>	To apply knowledge of DSE assessments.	Slides Whiteboard/flipchart	<p>Participate in group discussion/structured debate Active Listening</p> <p>Feedback to tutor</p>
6.2 Manual handling				
10 minutes	Tutor to explain the meaning of manual handling.	To understand the meaning of manual handling.	Slides	Active listening
6.2.1 Common types of manual handling injury				
15 minutes	<p>Tutor to give an overview of the structure of the spine, and some relevant anatomical consequences of poor manual handling actions:</p> <ul style="list-style-type: none"> - Prolapsed or herniated discs - Torn/strained ligaments - Tendon strains - Muscle strains - Hernias. <p>Tutor to explain how improper manual handling can result in heavy loads being dropped onto finger, legs and feet and the potential consequences of this.</p>	To understand the anatomical consequences of poor manual handling actions.	Slides	Active listening
6.2.2 Good handling technique for manually lifting loads				
15 minutes	Tutor to demonstrate the steps incorporated in a good manual handling technique; at each step, tutor to encourage learners to comment	To understand what constitutes good manual handling technique.	Slides	<p>Active listening</p> <p>Participate in group discussion/structured debate</p>

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	<p>regarding why this is important and what needs to be considered (structured debate).</p> <p>Tutor to show HSE videoclip <i>Preventing injuries from manual handling - Go Home Healthy</i> https://youtu.be/KIMSSJunXB4</p>		YouTube clip	
6.2.3 Avoiding/minimising manual handling risks				
20 minutes	<p>Tutor to introduce the acronym TILE to explain what to consider when assessing manual handling risks (tutor to refer to the earlier discussion on manual handling technique where appropriate).</p> <p>Tutor to explain each of the four steps of TILE, incorporating Q&A discussion with learners at each step to consider what measures could be used to help minimise risk before showing each summary slide.</p>	To understand the four steps that need to be considered when assessing manual handling risks and the control measures which could be taken.	Slides	<p>Active listening</p> <p>Participation in Q&A/discussion</p>
10 minutes	<p>Activity (group discussion)</p> <p>Tutor to facilitate a group discussion based on the task described in the scenario. Learners to apply TILE to the task. Tutor to collate feedback for each of the four steps.</p>	To reinforce understanding of TILE.	Slides Whiteboard/Flipchart	Participation in group discussion
30 minutes	<p>Activity (pair and share)</p> <p>Learners work in pairs to:</p> <ul style="list-style-type: none"> Identify three manual handling operations in their workplaces that might cause injury. Identify the manual handling operation of highest priority; that is, the one most likely to cause significant back (or other) injury. 	To apply theory about assessing manual handling risks to their own workplaces.	Slides	Participation in paired activity

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	<ul style="list-style-type: none"> Carry out a risk assessment of this highest priority operation using the TILE steps. Describe appropriate control measures to minimise the risk of injury in this highest-priority operation. <p>Tutor to encourage feedback and facilitate discussion (structured debate).</p>			Feedback to tutor/group
10 minutes	Activity (Group discussion/structured debate) Tutor to share case study and facilitate discussion – how might this have been managed differently?	To reinforce understanding of TILE.	Slides	Participation in group activity Active listening
6.3: Load-handling equipment				
10 minutes	Tutor to define mechanical assistance and explain when this should be used. Tutor to ask Learners for examples of different types of load-handling equipment.	To understand the meaning of mechanical assistance	Slides	Active listening
10 minutes	Tutor to explain the hazards associated with forklift trucks, and the causes of FLT overturning and collisions.	To understand the hazards associated with forklift trucks and causes of overturning and collisions.	Slides	Active listening
25 minutes	Activity (class divided into three groups) Each group to consider possible control measures to address the hazards associated with forklift trucks. Group 1: Control measures <u>before</u> driving Group 2: Control measures <u>while</u> driving Group 3: Control measures <u>after</u> driving. Each group to feedback to tutor, responses collated on whiteboard/flipchart. Tutor facilitates discussion with class.	To apply knowledge/reflect on control measures associated with forklift trucks.	Slides Whiteboard/Flipchart	Participation in group activity Feedback to tutor/class

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	Tutor uses slides to check all points have been covered.			
30 minutes	<p>Activity (pair and share)</p> <p>Tutor to allocate an item of load-handling equipment to each pair of learners:</p> <ul style="list-style-type: none"> - Sack trucks and trolleys - Pallet trucks - People-handling aids - Lifts - Hoists - Conveyors <p>Each pair to consider the hazards and control measures associated with that item of load-handling equipment.</p> <p>Tutor to collate feedback from each pair on the hazards and control measures associated with their allocated piece of equipment.</p> <p>Tutor to show summary slides for each piece of equipment following feedback to ensure all points have been covered.</p>	To understand the hazards associated with different items of load-handling equipment and appropriate control measures.	<p>Printed images of the different items of load-handling equipment:</p> <p>Sack trucks and trolleys</p> <p>Pallet Trucks</p> <p>People-handling aids</p> <p>Lifts</p> <p>Hoists</p> <p>Conveyors</p> <p>Whiteboard/Flipchart</p>	<p>Participation in paired activity</p> <p>Active listening</p> <p>Feedback to tutor/class</p> <p>Active listening</p>
5 mins	<p>Activity (Data extraction).</p> <p>Tutor to show case study and invite feedback</p>	To reinforce understanding of hazards associated with load-handling equipment.	Slides	<p>Data extraction</p> <p>Participation in group discussion</p>
10 mins	<p>Tutor to distinguish between the different types of crane (mobile/tower/overhead).</p> <p>Tutor to explain the hazards associated with mobile cranes.</p>	To reinforce understanding of hazards and control measures associated with load-handling equipment	Slides	Active listening

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	Tutor to explain the hazards associated with tower cranes.			
15 minutes	<p>Activity (individual) Learners (individually) to consider control measures for mobile and/or tower cranes.</p> <p>Tutor to collate feedback from learners and discuss (structured debate).</p> <p>Tutor to explain the <i>additional</i> hazards and control measures associated with overhead cranes.</p>	To reinforce understanding of hazards and control measures associated with load-handling equipment.	Slides Whiteboard/Flipchart	<p>Self-reflection</p> <p>Feedback to tutor</p> <p>Active listening</p>
6.3.2 Requirements for lifting operations				
10 minutes	Tutor to explain the requirements for lifting operations.	To understand the requirements for lifting operations	Slides	Active listening
6.3.3 Periodic inspection and examination/testing of lifting equipment				
5 minutes	<p>Tutor to explain why lifting equipment should be subject to thorough examination and testing - precise requirements will depend on the applicable national legislation.</p> <p>Tutor to clarify when lifting equipment should be examined by a competent person.</p>	To understand the requirements of periodic inspection and examination / testing of lifting equipment.	Slides	Active listening
10 minutes	<p>Closing Activity</p> <p>Tutor to recap the key points for element 6.</p>	To review the key learning points for element 6.	Slides	Active listening