

Training Package	Metal and Engineering (MEM05)			HSC Requirements and Advice
Title	Apply principles of occupational health and safety in the work environment			
Unit code	Competency field	Band	Unit weight	HSC Indicative Hours
MEM13014A	Occupational health and safety	A	There is no unit weighting for this unit.	15 Learning experiences for the HSC for this unit must be undertaken prior to work placement

Unit descriptor	This unit covers following occupational health and safety procedures in an engineering or similar work environment.
Prerequisites	Nil
Application of the competency	This unit covers essential skills and knowledge that underpin all units within the Metal and Engineering Training Package. The unit applies to working in the engineering, manufacturing or similar industries. Competencies demonstrated would be associated with performance of duties and use of specialist skills. This unit and these standards do not cover the skills of emergency teams such as fire fighting, first aid officer etc.
Related units	None

Evidence Guide

The evidence guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the unit descriptor, performance criteria, range statement and the assessment guidelines for the Metal and Engineering Training Package.

Overview of assessment requirements	Context of assessment	Interdependent assessment	Method of assessment
A person who demonstrates competency in this unit must be able to apply principles of occupational health and safety in the work environment.	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.	This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with applying principles of occupational health and safety in the work environment or other units requiring the exercise of the skills and knowledge covered by this unit.	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Evidence Guide cont/d			HSC Requirements and Advice
Consistency of performance	Required skills	Required knowledge	Key Terms and Concepts
Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.	<p>Look for evidence that confirms skills in:</p> <ul style="list-style-type: none"> • following safe working practices • maintaining a safe and clean condition workplace • carrying out workplace activities such as working safely, not endangering others, following company and legislative requirements, following procedures • selecting, wearing and storing appropriate personal protective equipment • using appropriate safety equipment and devices • carrying out work with the information given by safety signs and symbols • carrying out manual handling principles • using emergency equipment correctly • noting workplace hazards • contacting appropriate personnel and emergency services in the event of an accident • following emergency and evacuation procedures • communicating and interpreting information appropriate to OH&S within the scope of this unit • checking and clarifying task-related information • communicating with emergency personnel • checking for conformance to specifications. 	<p>Look for evidence that confirms knowledge of:</p> <ul style="list-style-type: none"> • rights, responsibilities and duties of employees and employers • use of personal protective equipment • appropriate equipment and safety devices for particular workplace tasks • reasons for using safety equipment and devices • meaning and application of safety signs and symbols • procedures and limits for manual handling • location and use of emergency equipment • reasons for selecting a particular type of equipment • procedures for identifying and reporting hazards • persons or services to be contacted in the event of a range of accidents • reasons for use of standard procedures • standard procedures including those for emergencies and evacuation • hazards and housekeeping requirements associated with the work environment • safe work practices and procedures. 	<ul style="list-style-type: none"> • accident • appropriate personnel • causes of workplace injury • consultation • correct manual handling • emergency and evacuation procedures • emergency equipment • emergency situations • employee and employer responsibilities • hazard • hierarchy of risk control measures • housekeeping and clean-up • incident • legislation, regulation and codes of practice • monitoring, reporting and recording • occupational health and safety (OHS) • <i>Occupational Health and Safety Act 2000</i> (NSW) • <i>Occupational Health and Safety Regulations 2001</i> (NSW) • OHS representative/committee • OHS training • participation • preventing common workplace injury • risk management • safe work practices and procedures • safety equipment and devices • safety signs and symbols • safety/lockout tagging • selection, use, maintenance and storage of personal protective equipment (PPE) • sources of information • standard operating procedures (SOP) • WorkCover NSW • worker's compensation • workplace injury.

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
1 Follow safe work practices	1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.	<p>The range statement provides information about the context in which the unit of competency is carried out. The variables [in bold] and scope [dot points] cater for different work requirements, work practices and knowledge between States, Territories and the Commonwealth, and between organisations and workplaces. The range statement relates to the unit as a whole and provides a focus for assessment. Text in italics in the performance criteria is explained here.</p> <p>The following variables may be present and <i>may include</i>, but are not limited to, the examples listed under the scope. All work is undertaken to relevant legislative requirements, where applicable.</p>	<p>Learning experiences for the HSC must address:</p> <p>An awareness of the cost of workplace injury:</p> <ul style="list-style-type: none"> • human • social • economic • organisational. <p>An awareness of sources of information regarding occupational health and safety (OHS) in the workplace including:-</p> <ul style="list-style-type: none"> • organisation/company policies and procedures <ul style="list-style-type: none"> - project/site safety plan - emergency plan - Australian Standards - training manuals - operator’s manuals • WorkCover NSW publications/safety alerts • National Occupational Health and Safety Commission (NOHSC) guidelines • legislation/regulations/codes of practice • standard operating procedures (SOP) • standard operation sheets • Material Safety Data Sheets (MSDS) • manufacturer’s specifications. <p>Acknowledgement of the importance of training in safe work practices and emergency procedures to meet OHS requirements.</p> <p>A basic awareness of the difference between:</p> <ul style="list-style-type: none"> • legislation • regulation • codes of practice. <p>A basic understanding of OHS legislation regulations and codes of practice including:</p> <ul style="list-style-type: none"> • <i>Occupational Health and Safety Act 2000</i> (NSW) • <i>Occupational Health and Safety Regulations 2001</i> (NSW) • <i>Workers Compensation Act 1987</i> (NSW) and amendments

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> • <i>Workplace Injury Management and Workers Compensation Act 1998</i> (NSW) • Codes of practice (WorkCover NSW): <ul style="list-style-type: none"> - OHS Consultation - Risk Assessment. <p>An awareness of safe work practices and procedures including:</p> <ul style="list-style-type: none"> • OHS induction training (general, work activity and site-specific) • selection, use and maintenance of personal protective equipment (PPE) • selection of appropriate tools for the task • correct use, maintenance and storage of tools, equipment and machinery • correct handling, application, transport and storage of hazardous and non-hazardous materials • safe posture (sitting, standing, bending and lifting) • correct manual handling (lifting and transferring) • correct use of fire fighting equipment: <ul style="list-style-type: none"> - fire blanket - fire extinguishers - fire hydrant and hose • hazard identification and risk control • basic first aid training and access to first aid kits • procedures to follow in the event of an emergency • effective communication and teamwork • adherence to work instructions, organisation/ company policies and standard operating procedures • housekeeping/clean-up procedures with due consideration to OHS and the environment. <p>A basic understanding of the roles and functions of key bodies involved in OHS including:</p> <ul style="list-style-type: none"> • WorkCover NSW • NOHSC • local councils • unions • professional associations.

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	<p>1.2 Housekeeping is undertaken in accordance with company procedures.</p>		<p>An awareness of:</p> <ul style="list-style-type: none"> • the importance of following SOP • the reasons for use of SOP. <p>Learning experiences for the HSC must address:</p> <p>Housekeeping and clean-up procedures with due consideration to the environment and OHS.</p> <p>A range of cleaning techniques including:</p> <ul style="list-style-type: none"> • wiping • washing • brushing • sweeping • scraping • use of cleaning agents (chemicals, solvents and detergents). <p>Cleaning equipment including:</p> <ul style="list-style-type: none"> • high pressure water cleaner • vacuum • brooms and brushes. <p>Tools and equipment cleaning/maintenance requirements (as necessary) including:</p> <ul style="list-style-type: none"> • removal of dirt, dust, grease and oil • sharpening • anti-rust treatments • repair/replacement of missing/damaged parts • scheduled servicing • refuel and top-up consumables. <p>An awareness of issues relating to storage of tools and equipment including:</p> <ul style="list-style-type: none"> • climatic effects • OHS considerations • stability • security • ease of access. <p>An awareness of procedures for minimisation of</p>
			<p>impact on the environment including:</p>

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	1.3 Responsibilities and duties of employees are understood and demonstrated in day-to-day actions.		<ul style="list-style-type: none"> • removal and disposal of non-reusable materials in a responsible manner: <ul style="list-style-type: none"> - work materials - chemicals • safe storage of reusable materials in accordance with company policy • containment of loose materials on site (such as litter and waste material). <p>Environmental requirements for dealing with waste including:</p> <ul style="list-style-type: none"> • recycling: <ul style="list-style-type: none"> - paper-based products - plastic - worn components - metal components • approved disposal of: <ul style="list-style-type: none"> - hazardous material - non-hazardous material. <p>Learning experiences for the HSC must address:</p> <p>An awareness of employee responsibilities under the OHS Act including the following:</p> <ul style="list-style-type: none"> • employees must take reasonable care of the health and safety of themselves and others • employees must cooperate with employers in their efforts to comply with occupational health and safety requirements • employees must not interfere with or misuse things provided for the health, safety or welfare of persons at work • employees must not obstruct attempts to give aid or attempts to prevent serious risk to the health and safety of a person at work • employees must not refuse a reasonable request to assist in giving aid or preventing a risk to health and safety • employees must not disrupt workplace by creating false health or safety fears.
			An awareness of employer responsibilities under the OHS Act including the following:

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			<ul style="list-style-type: none"> • maintaining places of work under their control in a safe condition, and ensure safe entrances and exits • making arrangements to ensure safe handling, storage and transport of plant and substances • providing and maintaining systems of work and work environments that are safe and without risks to health • providing information, instruction, training and supervision necessary to ensure the health and safety of employees • must not require employees to pay for anything done or provided to meet the requirements of the Act or Regulation • must consult with employees about OHS matters to enable them to contribute to decisions affecting their health, safety and welfare • must ensure the health and safety of visitors or people working who are not employees.
	<p>1.4 <i>Personal protective equipment</i> is worn and stored according to company procedures.</p>	<p>Personal protective equipment</p> <ul style="list-style-type: none"> • safety glasses • face and head protection • hard hats • protective footwear • protective clothing • breathing apparatus • ear protection • gloves. 	<p>Learning experiences for the HSC must address:</p> <p>Use and application of a range of PPE including:</p> <ul style="list-style-type: none"> • footwear • head protection • gloves • protective clothing • respirator • face mask/shield • hearing protection • eye protection. <p>Selection of PPE:</p> <ul style="list-style-type: none"> • correct for the task • manufacturer's specifications for use • correct fitting • serviceability. <p>Importance of correct fitting PPE.</p>
			<p>Maintenance of PPE according to manufacturer's instructions and enterprise SOP:</p> <ul style="list-style-type: none"> • cleaning and decontamination

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	<p>1.5 All <i>safety equipment and devices</i> are used according to legislative requirements and company/manufacturers' procedures.</p>	<p>Safety equipment and devices</p> <ul style="list-style-type: none"> • safety harness • screens, barriers and shielding • extraction fans • machine guards • isolation devices. 	<ul style="list-style-type: none"> • correct storage • regular checks for damage • repair/replacement of worn, malfunctioning or damaged equipment/parts • disposal of single-use equipment. <p>Learning experiences for the HSC must address:</p> <p>A knowledge of the use/application, limitations and maintenance of safety equipment and devices including:</p> <ul style="list-style-type: none"> • safety harnesses • screens • barriers and shielding • extraction fans • machine guards • isolation devices. <p>A basic awareness of restrictions placed on the use of equipment and machinery common to the industry.</p> <p>Acknowledgement of:</p> <ul style="list-style-type: none"> • the importance of safety equipment and devices • the reasons for using safety equipment and devices • the importance of pre-operational checks. <p>Reporting of serious faults including:</p> <ul style="list-style-type: none"> • verbal notification to appropriate personnel • recording on job card/maintenance log • safety/lockout tagging where appropriate. <p>Reasons for safety/lockout tagging including:</p> <ul style="list-style-type: none"> • ease of identification • evidence of serviceability • preventing use until repaired. <p>An awareness of appropriate person/process for removal of safety/lockout tagging.</p>
			<p>An awareness of supplier/manufacturer's responsibilities under the OHS Act including:</p> <ul style="list-style-type: none"> • providing access to MSDS • providing access to risk assessment guidelines for

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			equipment supplied.
	1.6 <i>Safety signs/symbols</i> are identified and followed as per instruction.	<p>Safety signs/symbols</p> <p>standard signage/symbols conforming to AS1319 – 1994: Safety signs for the occupational environment, and any other applicable Australian Standards</p> <ul style="list-style-type: none"> • workplace-specific signage • typical classes of relevant signs/symbols are: <ul style="list-style-type: none"> - mandatory - prohibition - danger - caution - general safety - safety information - fire safety equipment. 	<p>Learning experiences for the HSC must address:</p> <p>A basic awareness of AS1319 – 1994: <i>Safety signs for the occupational environment</i>.</p> <p>Selection and use of standard signs and symbols common to manufacturing, engineering and related services industries including:</p> <ul style="list-style-type: none"> • legislative requirements • meaning of colour and shape • appropriate placement and positioning.
	1.7 All <i>manual handling</i> is carried out in accordance with legal requirements, company procedures and National Occupational Health & Safety Commission guidelines.	<p>Manual handling</p> <ul style="list-style-type: none"> • posture, weight limits, bending, twisting. 	<p>Learning experiences for the HSC must address:</p> <p>A basic knowledge of NOHSC guidelines for manual handling.</p> <p>An awareness of legal requirements for weight limits.</p> <p>Awareness of correct manual handling techniques when:</p> <ul style="list-style-type: none"> • moving • lifting/carrying • using hand tools • loading/unloading • working at heights • bending and twisting • using mechanical aids • undertaking repetitious tasks.
	1.8 Emergency equipment is identified and appropriate use is demonstrated.		
2 Report workplace hazards and accidents	2.1 Actual and foreseeable workplace <i>hazards</i> are identified during course of	<p>Hazards</p> <p>For the purposes of this unit a hazard is</p>	<p>Learning experiences for the HSC must address:</p>

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	work and reported to appropriate person according to standard operating procedures.	<p>defined as anything with the potential for injury or damage.</p> <p>Hazards may be:</p> <ul style="list-style-type: none"> • physical <ul style="list-style-type: none"> - machinery - hot metal - electricity - fire • poor housekeeping: <ul style="list-style-type: none"> - spills - trip hazards such as congestion, clutter, waste build-up - cleanliness • noise and vibration • extremes of temperature and humidity • condition/design of equipment • individual (behavioural) <ul style="list-style-type: none"> - skylarking and foolishness - substance abuse - failure to follow procedures - lack of training or experience - carelessness - poor personal health/hygiene - using the wrong techniques/procedures - ignoring safety rules and signs - taking short cuts - knowingly using unsafe equipment • environmental hazards <ul style="list-style-type: none"> - explosive materials - flammable materials - poor ventilation - poor lighting - dust - fumes - vapours - gases 	<p>A definition of:</p> <ul style="list-style-type: none"> • hazard. <p>Identification of potential hazards to:</p> <ul style="list-style-type: none"> • self • colleagues • visitors • general public. <p>A range of hazards including:</p> <ul style="list-style-type: none"> • tools, equipment, machinery and plant operation and maintenance • manual handling • materials in use • work processes • work environment <ul style="list-style-type: none"> - poor visibility/lighting - inadequate amenities - poor housekeeping - falling objects - mineral fibres - chemical spills - gases - vapours - noise and vibration - dust - explosive materials - flammable materials - poor ventilation - fire - pollutants - other toxic or dangerous materials - extremes of temperature/humidity. • other people • human factors <ul style="list-style-type: none"> - competency - training
		<ul style="list-style-type: none"> - liquids - mineral fibres - chemical spills - pollutants - other toxic or dangerous materials. 	<ul style="list-style-type: none"> - stress - fitness - violence/bullying and fatigue - skylarking and foolishness - substance abuse - failure to follow procedures

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> - lack of training or experience - carelessness - poor personal health/hygiene - using the wrong techniques/procedures - ignoring safety rules and signs - taking short cuts - knowingly using unsafe equipment • simultaneous operations • repetitious tasks • interruptions to production. • working <ul style="list-style-type: none"> - alone - near traffic - near water - at heights - with electricity - with hot metal - in confined spaces - with and in extreme heat. <p>A basic understanding of risk management:</p> <ul style="list-style-type: none"> • identify hazards • assess associated risks • use appropriate control measures to eliminate/minimise risks • monitor and review the control measures. <p>A basic awareness of the hierarchy of risk control measures:</p> <ul style="list-style-type: none"> • Level 1 – eliminate the risk (such as discontinue the activity or not use the equipment) • Level 2 – minimise the risk by: <ul style="list-style-type: none"> - substituting the system of work/equipment (with something safer) - modifying the system of work/equipment (to make it safer)
			<ul style="list-style-type: none"> - isolating the hazard (such as introducing a restrictive work area) - introducing engineering control (such as guarding, fencing or safety screens) • Level 3 – other controls: <ul style="list-style-type: none"> - adopt administrative controls and safe work practices

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<p>- use PPE.</p> <p>Knowledge of designated personnel in relation to hazard identification and control within an organisation/company.</p> <p>The concept of ‘participation’ and ‘consultation’ as it relates to workplace safety and employee rights and responsibilities.</p> <p>An understanding of the election/formation, role and responsibilities of the OHS representative or committee.</p>
	<p>2.2 <i>Accidents and incidents</i> are reported according to workplace procedures.</p>	<p>Accidents and incidents For the purposes of this unit an accident is defined as ‘<i>an unplanned and unexpected event which interrupts the normal course of activity. It may or may not result in damage or injury</i>’. This definition includes near misses.</p> <p>An incident is defined here as any other unexpected or extraordinary event not classed as an accident.</p> <p>Examples include:</p> <ul style="list-style-type: none"> • burns • poisoning • broken limbs • eye accidents • other injuries • spills • explosions • falls • electrical accidents 	<p>Learning experiences for the HSC must address:</p> <p>A definition of:</p> <ul style="list-style-type: none"> • accident • incident. <p>Causes of common workplace injuries including:</p> <ul style="list-style-type: none"> • lack of protection and safety equipment • slips, trips and falls • poor housekeeping • poor maintenance • inadequate lighting • spills • obstructions • faulty or incorrect equipment • poor ergonomics • inadequate instruction, training and supervision • personal factors including stress, tiredness and inappropriate behaviour • unrealistic time frames
		<ul style="list-style-type: none"> • breakdowns • damage to equipment or materials/product • incidents involving physical, individual or environmental hazards. 	<ul style="list-style-type: none"> • negligence • fatigue. <p>An awareness of a range of potential workplace injuries including:</p> <ul style="list-style-type: none"> • allergic reactions • burns • cardiovascular failure

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			<ul style="list-style-type: none"> • dislocations and fractures • eye injuries • puncture wounds and cuts • crushing and amputation • sprains and strains • bites and stings • heat exhaustion • medical conditions including epilepsy, diabetes and asthma • poisoning and toxic substances • shock. <p>How and when to report.</p> <p>A basic awareness of monitoring and reporting for OHS including:</p> <ul style="list-style-type: none"> • formal/informal • verbal • written: <ul style="list-style-type: none"> - safety inspection reports - checklists - accident reports - WorkCover NSW notification - registers/logs/files. <p>Measures to prevent common workplace accidents, injury or impairment including:</p> <ul style="list-style-type: none"> • following safety procedures accurately • adopting correct posture and manual handling techniques • taking adequate rest breaks • controlling noise/sound levels and length of exposure to high levels of noise
			<ul style="list-style-type: none"> • using PPE • avoiding eye strain • correct use of chemicals and dangerous substances/equipment • stress management techniques • safe use of tools, machinery and equipment • procedures to deal with emergency, fire and accidents • risk management.

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
3 Follow emergency procedures	3.1 <i>Appropriate personnel</i> and emergency services and means of contacting them in the event of an incident can be identified.	Appropriate personnel <ul style="list-style-type: none"> • safety representative • occupational health and safety officer • OHS committee member • first aid officer • supervisor • union representative. 	Learning experiences for the HSC must address: Emergency situations including: <ul style="list-style-type: none"> • bomb threats • accidents/serious injury • robbery • fire • armed hold-up • natural disasters • equipment collapse. A basic awareness of the roles of appropriate personnel including: <ul style="list-style-type: none"> • first aid officer • OHS safety officer/safety representative • OHS committee member • colleagues • workplace manager • supervisor • emergency services • WorkCover NSW • union representative. Knowledge of emergency contact numbers: <ul style="list-style-type: none"> • ‘000’ – landline number • ‘112’ – mobile phones. How and when to seek assistance. The importance of acting within level of authority in terms of:
	3.2 <i>Emergency and evacuation procedures</i> are understood and carried out where required.	Emergency and evacuation procedures <ul style="list-style-type: none"> • documented workplace emergency procedures. 	<ul style="list-style-type: none"> • taking initiative • problem-solving • decision-making. Learning experiences for the HSC must address: Procedures to follow in the event of an emergency including: <ul style="list-style-type: none"> • notification: <ul style="list-style-type: none"> - appropriate authorities (emergency services and WorkCover NSW)
	3.3 Company evacuation procedures are followed in case of an emergency.		

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> - colleagues - supervisor • workplace/company policies and procedures: <ul style="list-style-type: none"> - evacuate - secure building • reporting. <p>An awareness of information required by emergency services attending the workplace site including:</p> <ul style="list-style-type: none"> • location • nearest cross street • nature of the incident • number of casualties • nature of injuries • contact name and number.