

### **3 Teaching Programs**

#### **3.1 Programming Individual Units of Competency**

When programming individual units of competency:

- ensure that all elements of competency are addressed
- ensure that HSC requirements are addressed
- stress links with other units
- as far as possible, adopt an integrated assessment approach.

**Sample Program                      Safety in the workplace**

**Rationale:**        This program provides the opportunity for students to develop knowledge and skills required to apply occupational health and safety requirements to daily workplace operations in a manufacturing, engineering and related services environment.

*Students will develop the specific knowledge and understanding to enable the skills to be developed and applied in the workplace. Actual demonstration of the underpinning knowledge and skills (elements and performance criteria) to confirm competency in MEM13014A will need to be demonstrated by the student throughout the HSC metal and engineering course. MEM13014A will be an integral component of all assessment.*

**Units of competency:**    MEM13014A    Apply principles of occupational health and safety in the work environment

**Key terms and concepts:**

<b>Apply occupational health and safety procedures</b>	
<ul style="list-style-type: none"> <li>• accident</li> <li>• appropriate personnel</li> <li>• causes of workplace injury</li> <li>• consultation</li> <li>• correct manual handling</li> <li>• emergency and evacuation procedures</li> <li>• emergency equipment</li> <li>• emergency situations</li> <li>• employee and employer responsibilities</li> <li>• hazard</li> <li>• hierarchy of risk control measures</li> <li>• housekeeping and clean-up</li> <li>• incident</li> <li>• legislation, regulation and codes of practice</li> <li>• monitoring, reporting and recording</li> <li>• occupational health and safety (OHS)</li> <li>• <i>Occupational Health and Safety Act 2000</i> (NSW)</li> <li>• <i>Occupational Health and Safety Regulations 2001</i> (NSW)</li> </ul>	<ul style="list-style-type: none"> <li>• OHS representative/committee</li> <li>• OHS training</li> <li>• participation</li> <li>• preventing common workplace injury</li> <li>• risk management</li> <li>• safe work practices and procedures</li> <li>• safety equipment and devices</li> <li>• safety signs and symbols</li> <li>• safety/lockout tagging</li> <li>• selection, use, maintenance and storage of personal protective equipment (PPE)</li> <li>• sources of information</li> <li>• standard operating procedures (SOP)</li> <li>• WorkCover NSW</li> <li>• worker’s compensation</li> <li>• workplace injury.</li> </ul>

**Please note** that the developers of the sample programs anticipated that this program would be delivered early in the course. Part A of the Syllabus (Section 8) states that *learning experiences for the HSC in MEM13014A must be undertaken prior to work placement.*

Although **not** a course requirement, it has been suggested that some schools choose to have their metal and engineering students undertake the same General Health and Safety Induction Training as the Construction students. This program may be integrated with the Induction program.

**Assessment:**

The tasks referred to in this table are briefly explained in the program itself and/or in Section 4 of this Support Document.

<b>MEM13014A Apply principles of occupational health and safety in the work environment</b>	
<i>Elements</i>	<i>Possible assessment strategy</i>
1. Follow safe work practices	<ul style="list-style-type: none"> <li>• Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course</li> <li>• Tasks 1, 3, 4, 5, 6, 7, 8, 12, 13, 15, 16, 17, 18, 20, 21, 22 and 23.</li> </ul>
2. Report workplace hazards and accidents	<ul style="list-style-type: none"> <li>• Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course</li> <li>• Tasks 1, 4, 5, 7, 11, 13, 15, 16, 17, 18, 20, 21, 22 and 23</li> </ul>
3. Follow emergency procedures	<ul style="list-style-type: none"> <li>• Tasks 1, 4, 6, 7 and 11.</li> </ul>

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18	Task 19	Task 20	Task 21	Task 22	Task 23	Task 24	Task 25	Task 26	Task 27	Task 28	
	Work placement activities & journal	Newspaper scrapbook	Extended response – Environmental issues	OHS written test	Workplace inspection – risk assessment	PEE, safety devices & emergency equipment	Scenario – dealing with an emergency	Visual communication test	Work order	Extended response – Quality	Written documentation	Work/job plan – individual & team task	Self & peer evaluation	Quality improvement system	Workshop assistant	Workgroup leader	MSDS	Tools, plant & equipment	Technical drawings	Toolbox	Vice/clamping device	Bush BBQ/pizza oven/camp oven	Industry-specific class project	Measurement & calculation exercises	Materials & components	Job quote	Charts & graphs	Freehand sketches	
<b>MEM13014A Apply principles of occupational health and safety in the work environment</b>																													
<i>1 Follow safe work practices</i>																													
1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements	✓		✓	✓	✓	✓	✓					✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1.2 Housekeeping is undertaken in accordance with company procedures	✓		✓	✓		✓							✓		✓	✓	✓			✓	✓	✓	✓						
1.3 Responsibilities and duties of employees are understood and demonstrated in day-to-day actions	✓			✓	✓	✓	✓					✓	✓		✓	✓	✓	✓		✓	✓	✓	✓						
1.4 Personal protective equipment is worn and stored according to company procedures	✓			✓		✓						✓	✓		✓	✓	✓	✓		✓	✓	✓	✓						
1.5 All safety equipment and devices are used according to legislative requirements and company/manufacturers' procedures	✓			✓		✓	✓						✓		✓	✓	✓	✓		✓	✓	✓	✓						
1.6 Safety signs/symbols are identified and followed as per instruction	✓			✓		✓		✓					✓		✓	✓	✓	✓		✓	✓	✓	✓						
1.7 All manual handling is carried out in accordance with legal requirements, company procedures and National Occupational Health & Safety Commission guidelines	✓			✓									✓		✓	✓		✓		✓	✓	✓	✓						
1.8 Emergency equipment is identified and appropriate use is demonstrated	✓			✓		✓	✓						✓				✓												

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	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18	Task 19	Task 20	Task 21	Task 22	Task 23	Task 24	Task 25	Task 26	Task 27	Task 28	
<b>2 Report workplace hazards and accidents</b>																													
2.1 Actual and foreseeable workplace hazards are identified during course of work and reported to appropriate person according to standard operating procedures	✓			✓	✓								✓		✓	✓	✓	✓		✓	✓	✓	✓						
2.2 Accidents and incidents are reported according to workplace procedures	✓			✓			✓				✓		✓			✓				✓	✓	✓	✓						
<b>3 Follow emergency procedures</b>																													
3.1 Appropriate personnel and emergency services and means of contacting them in the event of an incident can be identified	✓			✓		✓	✓																						
3.2 Emergency and evacuation procedures are understood and carried out where required	✓			✓		✓	✓				✓																		
3.3 Company evacuation procedures are followed in case of an emergency	✓			✓		✓	✓																						

Unit / Element of competency / Performance criteria	Content	Possible learning experiences / activities
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b>                      1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.</p> <p><b>2 Report workplace hazards and accidents</b>                      2.2 Accidents and incidents are reported according to workplace procedures.</p>	<p><b>Injuries in the workplace</b></p> <p>An awareness of the cost of workplace injury:</p> <ul style="list-style-type: none"> <li>• human</li> <li>• social</li> <li>• economic</li> <li>• organisational.</li> </ul> <p>A definition of:</p> <ul style="list-style-type: none"> <li>• accident</li> <li>• incident.</li> </ul> <p>Causes of common workplace injuries:</p> <ul style="list-style-type: none"> <li>• lack of protection and safety equipment</li> <li>• slips, trips and falls</li> <li>• poor housekeeping</li> </ul>	<p><i>Occupational health and safety (OHS) underpins all aspects of the professional metal, engineering and related services industries worker. Students should demonstrate high OHS standards for each session of training</i></p> <p>Class discussion about the concept of workplace health and workplace safety and the difference/s between the two terms.</p> <p>Develop a portfolio of newspaper articles on injuries in the manufacturing, engineering and related services industries.</p> <p>Use the internet to obtain statistical data on workplace injuries in manufacturing, engineering and related services industries workplaces on a national or state level. Present the results in a graph or table.</p> <p>Discuss the costs of workplace injury to the employer and employee and write a newspaper article to inform the community of these costs.</p> <p>Students define each term in their own words. Share their ideas with the class.</p> <p>Compare with Training Package definition:</p> <ul style="list-style-type: none"> <li>• accident – <i>an unplanned and unexpected event which interrupts the normal course of activity. It may or may not result in damage or injury. This definition includes near misses.</i></li> <li>• incident – <i>any other unexpected or extraordinary event not classed as an accident.</i></li> </ul> <p>Brainstorm – what are the causes of workplace injury?</p> <p>Scan the portfolio of newspaper articles taking note of the causes of the injuries and add to the list.</p>

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	<ul style="list-style-type: none"> <li>• poor maintenance</li> <li>• inadequate lighting</li> <li>• spills</li> <li>• obstructions</li> <li>• faulty or incorrect equipment</li> <li>• poor ergonomics</li> <li>• inadequate instruction, training and supervision</li> <li>• personal factors including stress, tiredness and inappropriate behaviour</li> <li>• unrealistic time frames</li> <li>• negligence</li> <li>• fatigue.</li> </ul> <p>An awareness of a range of potential workplace injuries:</p> <ul style="list-style-type: none"> <li>• allergic reactions</li> <li>• burns</li> <li>• cardiovascular failure</li> <li>• dislocations and fractures</li> <li>• eye injuries</li> <li>• puncture wounds and cuts</li> <li>• crushing and amputation</li> <li>• sprains and strains</li> <li>• bites and stings</li> <li>• heat exhaustion</li> <li>• medical conditions including epilepsy, diabetes and asthma</li> <li>• poisoning and toxic substances</li> <li>• shock.</li> </ul> <p>Measures to prevent common workplace accidents, injury or impairment:</p> <ul style="list-style-type: none"> <li>• following safety procedures accurately</li> <li>• adopting correct posture and manual handling techniques</li> <li>• taking adequate rest breaks</li> </ul>	<p>[Link to Task 4]</p> <p>Brainstorm – potential workplace injuries for the manufacturing, engineering and related services industries.</p> <p>Activity – each student to be allocated a workplace injury to investigate. Identify the signs/symptoms of the injury and basic first aid techniques required. Information to be collated from all class members, presented in table format and provided as a handout.</p> <p>Class discussion – preventative measures.</p> <p>Activity – following on from above, students design a poster – to be displayed in the classroom/ workshop – highlighting the injury, preventative measures and basic</p>

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	<ul style="list-style-type: none"> <li>• controlling noise/sound levels and length of exposure to high levels of noise</li> <li>• using PPE</li> <li>• avoiding eye strain</li> <li>• correct use of chemicals and dangerous substances/ equipment</li> <li>• stress management techniques</li> <li>• safe use of tools, machinery and equipment</li> <li>• procedures to deal with emergency, fire and accidents</li> <li>• risk management.</li> </ul>	<p>first aid techniques.</p> <p>[Link to Task 4]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.</p>	<p><b>Sources of OHS information</b></p> <p>An awareness of sources of information regarding occupational health and safety (OHS) in the workplace:·</p> <ul style="list-style-type: none"> <li>• organisation/company policies and procedures                             <ul style="list-style-type: none"> <li>- project/site safety plan</li> <li>- emergency plan</li> <li>- Australian Standards</li> <li>- training manuals</li> <li>- operator’s manuals</li> </ul> </li> <li>• WorkCover NSW publications/safety alerts</li> <li>• National Occupational Health and Safety Commission (NOHSC) guidelines</li> <li>• legislation/regulations/codes of practice</li> <li>• standard operating procedures (SOP)</li> <li>• standard operation sheets</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer’s specifications.</li> </ul> <p>An awareness of:</p> <ul style="list-style-type: none"> <li>• the importance of following SOP</li> <li>• the reasons for use of SOP.</li> </ul>	<p>Focus question – as a manufacturing, engineering and related services industries worker, where could you find information regarding OHS in your workplace?</p> <p>Compile a list of a range of sources and for each source make brief notes regarding the type of OHS information it provides the worker.</p> <p>Visual stimulus – samples of the listed sources.</p> <p>[Link to Task 4]</p> <p>Class discussion and accompanying handout.</p>

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	<p>An acknowledgement of the importance of training in safe work practices and emergency procedures to meet OHS requirements.</p>	<p>Class discussion – why OHS training is necessary and how training may be delivered.</p> <p>Focus question – what should be included in an OH&amp;S induction package for a new employee?</p> <p>Review the OHS induction procedures for the metal and engineering course and while on work placement.</p> <p>Visual stimulus – operator manuals for tools and equipment likely to be used by students during the metal and engineering course.</p> <p>Students design an induction course for a tool and piece of equipment and ‘deliver’ this training to classmates. [Link to Task 18]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.</p> <p>1.3 Responsibilities and duties of employees are understood and demonstrated in day-to-day actions.</p> <p>1.5 All safety equipment and devices are used according to legislative requirements and company/manufacturers’ procedures.</p> <p><b>2 Report workplace hazards and accidents</b></p> <p>2.1 Actual and foreseeable workplace hazards are identified during course of work and reported to appropriate person according to standard operating procedures.</p>	<p><b>OHS legislation</b></p> <p>A basic awareness of the difference between:</p> <ul style="list-style-type: none"> <li>• legislation</li> <li>• regulation</li> <li>• codes of practice.</li> </ul> <p>A basic understanding of OHS legislation, regulations and codes of practice:</p> <ul style="list-style-type: none"> <li>• <i>Occupational Health and Safety Act 2000 (NSW)</i> <i>Occupational Health and Safety Regulations 2001 (NSW)</i></li> <li>• <i>Workers Compensation Act 1987 (NSW)</i> and</li> </ul>	<p>Develop a glossary of terms:</p> <ul style="list-style-type: none"> <li>• legislation</li> <li>• act</li> <li>• regulation</li> <li>• standards</li> <li>• code of practice.</li> </ul> <p>Internet activity – visit the website for WorkCover NSW. Go to the section on ‘Laws and Policy’.</p> <p>[Link to Task 4]</p> <p>Define the term ‘occupational health and safety’.</p> <p>Class discussion – the purposes of OHS legislation and codes of practice.</p> <p>Summarise key points of the legislation, regulations and</p>

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	<p>amendments</p> <ul style="list-style-type: none"> <li>• <i>Workplace Injury Management and Workers Compensation Act 1998 (NSW)</i></li> <li>• Codes of practice (WorkCover NSW)                             <ul style="list-style-type: none"> <li>- OHS Consultation</li> <li>- Risk Assessment.</li> </ul> </li> </ul> <p>The concept of ‘participation’ and ‘consultation’ as it relates to workplace safety and employee rights and responsibilities.</p> <p>An awareness of employer responsibilities under the OHS Act including the following:</p> <ul style="list-style-type: none"> <li>• maintaining places of work under their control in a safe condition, and ensure safe entrances and exits</li> <li>• making arrangements to ensure safe handling, storage and transport of plant and substances</li> <li>• providing and maintaining systems of work and work environments that are safe and without risks to health</li> <li>• providing information, instruction, training and supervision necessary to ensure the health and safety of employees</li> <li>• must not require employees to pay for anything done or provided to meet the requirements of the Act or Regulation</li> <li>• must consult with employees about OHS matters to</li> </ul>	<p>codes of practice listed as it applies to the manufacturing, engineering and related services industries. This could be provided in a handout.</p> <p>Alternatively students could undertake an internet research activity where they are required to create a table outlining the following information for the legislation, regulations and codes of practice listed:</p> <ul style="list-style-type: none"> <li>• website address where each can be accessed</li> <li>• a brief outline of:                             <ul style="list-style-type: none"> <li>- what each covers</li> <li>- the employer’s responsibilities</li> <li>- the employee’s responsibilities.</li> </ul> </li> </ul> <p>[Link to Task 4]</p> <p>Define the terms ‘participation’ and ‘consultation’.</p> <p>Class discussion about the concept of participation and its relationship to the rights and responsibilities of employers and employees under the OHS legislation.</p> <p>Handout briefly outlining employer and employee responsibilities. Students answer questions to demonstrate their understanding of these responsibilities.</p> <p>Class discussion – consequences of employers/employees, as a group and individually, not taking responsibility for OHS in the workplace.</p> <p>Role play – scenarios of good and poor OHS, highlighting employer and employee responsibilities.</p> <p>Class discussion:</p> <ul style="list-style-type: none"> <li>• student responsibilities while on work placement</li> <li>• what they should expect from their work placement employer.</li> </ul>

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	<p>enable them to contribute to decisions affecting their health, safety and welfare</p> <ul style="list-style-type: none"> <li>• must ensure the health and safety of visitors or people working who are not employees.</li> </ul> <p>An awareness of employee responsibilities under the OHS Act including the following:</p> <ul style="list-style-type: none"> <li>• employees must take reasonable care of the health and safety of themselves and others</li> <li>• employees must cooperate with employers in their efforts to comply with occupational health and safety requirements</li> <li>• employees must not interfere with or misuse things provided for the health, safety or welfare of persons at work</li> <li>• employees must not obstruct attempts to give aid or attempts to prevent serious risk to the health and safety of a person at work</li> <li>• employees must not refuse a reasonable request to assist in giving aid or preventing a risk to health and safety</li> <li>• employees must not disrupt workplace by creating false health or safety fears.</li> </ul> <p>An awareness of supplier/manufacturer’s responsibilities under the OHS Act:</p> <ul style="list-style-type: none"> <li>• providing access to MSDS</li> <li>• providing access to risk assessment guidelines for equipment supplied.</li> </ul>	<p>[Link to Task 4]</p> <p>Class discussion.</p> <p>Define: MSDS.</p> <p>Overhead:</p> <ul style="list-style-type: none"> <li>• information provided in an MSDS</li> <li>• how/where to locate MSDS.</li> </ul> <p>Visual stimulus:</p> <ul style="list-style-type: none"> <li>• sample MSDS for material/s that the students will encounter during their metal and engineering course</li> <li>• visit website: <a href="http://www.msds.com.au">www.msds.com.au</a>.</li> </ul> <p>Class discussion:</p> <ul style="list-style-type: none"> <li>• the layout, information provided and the importance of</li> </ul>

Unit / Element of competency / Performance criteria	Content	Possible learning experiences / activities
		<p>a standard format</p> <ul style="list-style-type: none"> <li>• supplier/manufacturer responsibilities.</li> </ul> <p>Allocate to each student one material that will be used in the school workshop during their metal and engineering course. They are to contact the supplier/manufacturer (by telephone, letter, website, etc) to obtain the MSDS. Prior to the material being used, the student will provide the class with a copy of the MSDS and brief the other students on the main points and safe use. [Task 17]</p> <p>Visual stimulus: sample risk assessment guidelines for piece/s of equipment students will use in the school workshop and/or during work placement.</p> <p>Allocate to each student one piece of equipment that will be used in the school workshop during their metal and engineering course. They are to contact the supplier/manufacturer (by telephone, letter, website, etc) to obtain the risk assessment guidelines. Prior to the equipment being used, the student will provide the class with a copy of the guidelines and brief the other students on the main points and safe use. [Link to Task 18]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.</p> <p><b>2 Report workplace hazards and accidents</b></p> <p>2.1 Actual and foreseeable workplace hazards are identified during course of work and reported to appropriate person according to standard operating procedures.</p>	<p><b>Key groups in OHS</b></p> <p>An understanding of the election/formation, role and responsibilities of the OHS representative or committee.</p>	<p>Look at the requirements for an OHS committee including:</p> <ul style="list-style-type: none"> <li>• legal requirements</li> <li>• representative composition</li> <li>• key groups involved</li> <li>• key responsibilities.</li> </ul> <p>Guest speaker – chair of the school OHS committee – to discuss:</p> <ul style="list-style-type: none"> <li>• how the committee is formed/elected and its composition</li> <li>• training required</li> </ul>

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	<p>A basic understanding of the roles and functions of key bodies involved in OHS:</p> <ul style="list-style-type: none"> <li>• WorkCover NSW</li> <li>• NOHSC</li> <li>• local councils</li> <li>• unions</li> <li>• professional associations.</li> </ul>	<ul style="list-style-type: none"> <li>• roles and responsibilities</li> <li>• benefits of having an OHS committee for employers and employees</li> <li>• concept of participation and consultation.</li> </ul> <p>Hypothetical – form an OHS committee and conduct a mock OHS audit of the school workshop facilities.</p> <p>[Link to Tasks 4 &amp; 5]</p> <p>Internet activity – visit the websites of listed organisations to identify their main role and function as it relates to the manufacturing, engineering and related services industries.</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>2 Report workplace hazards and accidents</b></p> <p>2.1 Actual and foreseeable workplace hazards are identified during course of work and reported to appropriate person according to standard operating procedures.</p>	<p><b>Hazard identification and risk management</b></p> <p>A definition of:</p> <ul style="list-style-type: none"> <li>• hazard.</li> </ul> <p>A basic understanding of risk management:</p> <ul style="list-style-type: none"> <li>• identify hazards</li> <li>• assess associated risks</li> <li>• use appropriate control measures to eliminate/minimise risks</li> <li>• monitor and review the control measures.</li> </ul>	<p>Define:</p> <ul style="list-style-type: none"> <li>• hazard</li> <li>• risk.</li> </ul> <p>Class discussion and handout.</p> <p>Access the WorkCover NSW site:  <a href="http://www.workcover.nsw.gov.au/OHS/ManagingSafetyRisks/default.htm">www.workcover.nsw.gov.au/OHS/ManagingSafetyRisks/default.htm</a>.</p> <p>Review the section on managing safety risks and create a brochure informing the community about risk management.</p> <p>[Link to Tasks 4 &amp; 5]</p>

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	<p>Identification of potential hazards to:</p> <ul style="list-style-type: none"> <li>• self</li> <li>• visitors</li> <li>• colleagues</li> <li>• the general public.</li> </ul> <p>A range of hazards:</p> <ul style="list-style-type: none"> <li>• tools, equipment, machinery and plant operation and maintenance</li> <li>• manual handling</li> <li>• materials in use</li> <li>• work processes</li> <li>• work environment                             <ul style="list-style-type: none"> <li>- poor visibility/lighting</li> <li>- inadequate amenities</li> <li>- poor housekeeping</li> <li>- falling objects</li> <li>- mineral fibres</li> <li>- chemical spills</li> <li>- gases</li> <li>- vapours</li> <li>- noise and vibration</li> <li>- dust</li> <li>- explosive materials</li> <li>- flammable materials</li> <li>- poor ventilation</li> <li>- fire</li> <li>- pollutants</li> <li>- other toxic or dangerous materials</li> <li>- extremes of temperature/humidity.</li> </ul> </li> <li>• other people</li> <li>• human factors                             <ul style="list-style-type: none"> <li>- competency</li> <li>- training</li> <li>- stress</li> <li>- fitness</li> <li>- violence/bullying and fatigue</li> <li>- skylarking and foolishness</li> </ul> </li> </ul>	<p>Focus question: what persons may be at risk in a manufacturing, engineering and related services industries environment?</p> <p>[Link to Task 4]</p> <p>Brainstorm to create a mind map – potential hazards in the manufacturing, engineering and related services industries workplace environment.</p> <p>[Link to Tasks 4 &amp; 5]</p>

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	<ul style="list-style-type: none"> <li>- substance abuse</li> <li>- failure to follow procedures</li> <li>- lack of training or experience</li> <li>- carelessness</li> <li>- poor personal health/hygiene</li> <li>- using the wrong techniques/procedures</li> <li>- ignoring safety rules and signs</li> <li>- taking short cuts</li> <li>- knowingly using unsafe equipment</li> <li>• simultaneous operations</li> <li>• repetitious tasks</li> <li>• interruptions to production.</li> <li>• working                             <ul style="list-style-type: none"> <li>- alone</li> <li>- near traffic</li> <li>- near water</li> <li>- at heights</li> <li>- with electricity</li> <li>- with hot metal</li> <li>- in confined spaces</li> <li>- with and in extreme heat.</li> </ul> </li> </ul> <p>Knowledge of designated personnel in relation to hazard identification and control within an organisation/company.</p> <p>A basic awareness of the hierarchy of risk control measures:</p> <ul style="list-style-type: none"> <li>• Level 1 – eliminate the risk (such as discontinue the activity or not use the equipment)</li> <li>• Level 2 – minimise the risk by:                             <ul style="list-style-type: none"> <li>- substituting the system of work/equipment (with something safer)</li> <li>- modifying the system of work/equipment (to make it safer)</li> </ul> </li> </ul>	<p>Class discussion:</p> <ul style="list-style-type: none"> <li>• who is responsible for hazard identification and control in the workplace?</li> <li>• appropriate procedures for reporting hazards.</li> </ul> <p>Class discussion – strategies to control or eliminate risks in the workplace.</p> <p>Develop a flow chart to show the steps in risk management (from identifying hazards through to monitoring and review of the control measures).</p> <p>In pairs or small groups, students are to perform a risk assessment of a piece of equipment or aspect of the school</p>

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	<ul style="list-style-type: none"> <li>- isolating the hazard (such as introducing a restrictive work area)</li> <li>- introducing engineering control (such as guarding, fencing or safety screens)</li> <li>• Level 3 – other controls:               <ul style="list-style-type: none"> <li>- adopt administrative controls and safe work practices</li> <li>- use PPE.</li> </ul> </li> </ul>	<p>workshop [Task 5].</p> <p>Activity – apply the hierarchy of risk control for a case study then report their findings to the class.</p> <p>Work placement activity – access the organisation/ company policies/procedures for risk control in the workplace and compare with classmates. [Link to Task 1]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.1 Work is carried out safely and in accordance with company policy and procedures and legislative requirements.</p> <p>1.4 Personal protective equipment is worn and stored according to company procedures.</p> <p>1.5 All safety equipment and devices are used according to legislative requirements and company/manufacturers’ procedures.</p> <p>1.6 Safety signs/symbols are identified and followed as per instruction.</p> <p>1.8 Emergency equipment is identified and appropriate use is demonstrated.</p>	<p><b>Safe work practices</b></p> <p>An awareness of safe work practices and procedures:</p> <ul style="list-style-type: none"> <li>• OHS induction training (general, work activity and site-specific)</li> <li>• selection, use and maintenance of personal protective equipment (PPE)</li> <li>• selection of appropriate tools for the task</li> <li>• correct use, maintenance and storage of tools, equipment and machinery</li> <li>• correct handling, application, transport and storage of hazardous and non-hazardous materials</li> <li>• safe posture (sitting, standing, bending and lifting)</li> <li>• correct manual handling (lifting and transferring)</li> <li>• correct use of fire fighting equipment:               <ul style="list-style-type: none"> <li>- fire blanket</li> <li>- fire extinguishers</li> <li>- fire hydrant and hose</li> </ul> </li> <li>• hazard identification and risk control</li> <li>• basic first aid training and access to first aid kits</li> <li>• procedures to follow in the event of an emergency</li> <li>• effective communication and teamwork</li> <li>• adherence to work instructions, organisation/ company policies and standard operating procedures</li> <li>• housekeeping/clean-up procedures with due consideration to OHS and the environment.</li> </ul>	<p>Class discussion and handout:</p> <ul style="list-style-type: none"> <li>• identify OHS concerns for a manufacturing, engineering and related services industries company/organisation</li> <li>• review a range of safe work practices that should be adopted by an employee in their workplace.</li> </ul> <p>Visual stimulus – video.</p> <p>Guest speaker – NSW Fire Brigade or Rural Fire Services to address correct use of fire fighting equipment including:</p> <ul style="list-style-type: none"> <li>• fire blanket</li> <li>• types of extinguishers and identifying colour</li> <li>• fire hydrant and hose.</li> </ul> <p>Practical task: selection and use of fire fighting equipment to extinguish a simulated fire.</p> <p>[Link to Tasks 4 and 6]</p>

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	<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:</p> <ul style="list-style-type: none"> <li>• legislative requirements</li> <li>• meaning of shape and colour</li> <li>• appropriate placement and positioning.</li> </ul> <p>A knowledge of the use/application, limitations and maintenance of safety equipment and devices:</p> <ul style="list-style-type: none"> <li>• safety harnesses</li> <li>• screens</li> <li>• barriers and shielding</li> <li>• extraction fans</li> <li>• machine guards</li> <li>• isolation devices.</li> </ul> <p>Acknowledgement of:</p> <ul style="list-style-type: none"> <li>• the importance of safety equipment and devices</li> <li>• the reasons for using safety equipment and devices</li> <li>• the importance of pre-operational checks.</li> </ul> <p>Reporting of serious faults:</p> <ul style="list-style-type: none"> <li>• verbal notification to appropriate personnel</li> <li>• recording on job card/maintenance log</li> <li>• safety/lockout tagging where appropriate.</li> </ul>	<p>Handout.</p> <p>[Link to Task 8]</p> <p>Visual stimulus (handout) –a range of signs and symbols used in the workplace and their meaning.</p> <p>Quiz – students to identify a range of commonly used signs and symbols and state their function/purpose.</p> <p>Internet activity – explore a website such as <a href="http://www.seton.com.au">www.seton.com.au</a> (a safety equipment manufacturer) and identify a range of standard safety signs appropriate to hazards in a manufacturing, engineering and related services industries environment.</p> <p>[Link to Task 8]</p> <p>Teacher demonstration – use of safety equipment/devices.</p> <p>[Link to Tasks 4 and 6]</p> <p>Class discussion.</p> <p>Handout – outlining school procedures regarding reporting of faults.</p> <p>Class discussion – responsibilities of the student, teacher and school in regard to the reporting of faults.</p>

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	<p>Reasons for safety/lockout tagging:</p> <ul style="list-style-type: none"> <li>• ease of identification</li> <li>• evidence of serviceability</li> <li>• preventing use until repaired.</li> </ul> <p>An awareness of appropriate person/process for removal of safety/lockout tagging.</p> <p>Use and application of a range of PPE:</p> <ul style="list-style-type: none"> <li>• footwear</li> <li>• head protection</li> <li>• gloves</li> <li>• protective clothing</li> <li>• respirator</li> <li>• face mask/shield</li> <li>• hearing protection</li> <li>• eye protection.</li> </ul> <p>Selection of PPE:</p> <ul style="list-style-type: none"> <li>• correct for the task</li> <li>• manufacturer’s specifications for use</li> <li>• correct fitting</li> <li>• serviceability.</li> </ul> <p>Importance of correct fitting PPE.</p>	<p>Visual stimulus – examples of safety/lockout tagging.</p> <p>Class discussion – repercussions of ignoring tagging.</p> <p>Practical activity – identify appropriate tagging for electric tools and equipment used in the school workshop.</p> <p>Class discussion.</p> <p>Develop a list of the PPE required when undertaking tasks in a number of different contexts.</p> <p>[Link to Tasks 4 and 6]</p> <p>Class discussion:</p> <ul style="list-style-type: none"> <li>• identify particular situations in the industry where PPE is prescribed by law</li> <li>• consequences of incorrect selection and fit of PPE.</li> </ul> <p>Select PPE for particular tasks and demonstrate appropriate use (adjusting fit as necessary).</p> <p><i>Students are to demonstrate the correct use of PPE at all times during the metal and engineering course.</i></p> <p>[Link to Tasks 4 and 6]</p>

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	<p>Maintenance of PPE according to manufacturer’s instructions and enterprise SOP:</p> <ul style="list-style-type: none"> <li>• cleaning and decontamination</li> <li>• correct storage</li> <li>• regular checks for damage</li> <li>• repair/replacement of worn, malfunctioning or damaged equipment/parts</li> <li>• disposal of single-use equipment.</li> </ul> <p>A basic awareness of restrictions placed on the use of equipment and machinery common to the industry.</p>	<p>Students are to develop a set of standard operating procedures (in line with manufacturer’s instructions) for the maintenance of PPE required for a particular task and then demonstrate to their class mates. (Each student to be allocated a different task to ensure a range of PPE is addressed.)</p> <p>[Link to Tasks 4 and 6]</p> <p>Class discussion.</p> <p>Teacher to provide specific examples and advice regarding use of equipment and machinery at school and during work placement.</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.7 All manual handling is carried out in accordance with legal requirements, company procedures and National Occupational Health and Safety Commission guidelines.</p>	<p><b>Safe manual handling</b></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"> <li>• moving</li> <li>• lifting/carrying</li> <li>• using hand tools</li> <li>• loading/unloading</li> <li>• working at heights</li> <li>• bending and twisting</li> <li>• using mechanical aids</li> <li>• undertaking repetitious tasks.</li> </ul>	<p>Handout.</p> <p>[Link to Task 4]</p> <p>Class discussion:</p> <ul style="list-style-type: none"> <li>• the importance of correct manual handling techniques</li> <li>• the consequences of incorrect manual handling</li> <li>• the use of appropriate mechanical aids.</li> </ul> <p>Demonstration or video: correct manual handling techniques.</p> <p>Handout – outlining correct manual handling techniques for a range of items and situations likely to occur in the school workshop and industry site.</p> <p>Internet activity: students visit the WorkCover NSW Safety Zone interactive website:</p>

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		<p><a href="http://workcover.cadre.com.au/index_1st.html">http://workcover.cadre.com.au/index_1st.html</a> and view the ‘moving and handling’ section.</p> <p>Students prepare a manual handling checklist that may be used to evaluate each other’s manual handling technique.</p> <p>[Link to Task 4]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b>                      1.2 Housekeeping is undertaken in accordance with company procedures.</p>	<p><b>Housekeeping</b></p> <p>Housekeeping and clean-up procedures with due consideration to the environment and OHS.</p> <p>A range of cleaning techniques:</p> <ul style="list-style-type: none"> <li>• wiping</li> <li>• washing</li> <li>• brushing</li> <li>• sweeping</li> <li>• scraping</li> <li>• use of cleaning agents (chemicals, solvents and detergents).</li> </ul> <p>Cleaning equipment:</p> <ul style="list-style-type: none"> <li>• high pressure water cleaner</li> <li>• vacuum</li> <li>• brooms and brushes.</li> </ul>	<p>Debate – to highlight the importance of good housekeeping in the manufacturing, engineering and related services industries (eg ‘Good housekeeping is only for 5 star hotels’).</p> <p>Introduce the concepts of good housekeeping and safe and environmentally friendly clean-up procedures.</p> <p>Brainstorm – a range of cleaning techniques and equipment and situations in which their use is most appropriate.</p> <p>Practical exercises to gain experience using different cleaning techniques and equipment.</p> <p>Throughout all workshop sessions:</p> <ul style="list-style-type: none"> <li>• on a rotational basis each month, allocate the responsibility of ‘workshop assistant’ to a team of two or four students. These students will assist the teacher with housekeeping in the school workshop. Students should display an understanding of OHS, environmental awareness, storage requirements and ease of access for materials and cleaning, maintenance and storage of tools, plant and equipment. [Task 15]</li> <li>• on a rotational basis each fortnight, allocate the responsibility of ‘workgroup leader’ (in partnership with the teacher) to a student. This student is</li> </ul>

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	<p>Environmental requirements for dealing with waste:</p> <ul style="list-style-type: none"> <li>• recycling: <ul style="list-style-type: none"> <li>- paper-based products</li> <li>- plastic</li> <li>- worn components</li> <li>- metal components</li> </ul> </li> <li>• approved disposal of: <ul style="list-style-type: none"> <li>- hazardous material</li> <li>- non-hazardous material.</li> </ul> </li> </ul> <p>An awareness of procedures for minimisation of impact on the environment:</p> <ul style="list-style-type: none"> <li>• removal and disposal of non-reusable materials in a responsible manner <ul style="list-style-type: none"> <li>- work materials</li> <li>- chemicals</li> </ul> </li> <li>• safe storage of reusable materials in accordance with company policy</li> <li>• containment of loose materials on site (such as litter and waste material).</li> </ul>	<p>responsible for ensuring the workshop clean-up procedures occur. This includes allocation of cleaning duties to each student in the class, as well as safe storage of student jobs; return of materials, tools and equipment to correct location; and reporting of any tools and equipment requiring maintenance or repair. [Task 16]</p> <p>Investigation of recycling and approved waste disposal options available for the metal, engineering and related services industries and according to school/college policy.</p> <p>Work placement activity – investigate clean-up procedures including methods used to clean tools and equipment and the workshop, recycling and/or disposal of materials and storage of materials, tools, plant and equipment. [Link to Task 1]</p> <p>Industry visit – to a local manufacturing, engineering or related services industries enterprise.</p> <p>Class discussion.</p> <p>Written task – extended response question (preparation and practice for HSC exam) – housekeeping and clean-up procedures with due consideration to the environment and OHS. [Task 3]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>2 Report workplace hazards and accidents</b>  2.2 Accidents and incidents are reported according to workplace procedures.</p>	<p><b>OHS monitoring and reporting</b></p> <p>A basic awareness of monitoring and reporting for OHS:</p> <ul style="list-style-type: none"> <li>• formal/informal</li> <li>• verbal</li> <li>• written <ul style="list-style-type: none"> <li>- safety inspection reports</li> </ul> </li> </ul>	<p>Class discussion:</p> <ul style="list-style-type: none"> <li>• advantages and disadvantages of types of reporting (formal versus informal, verbal versus written, combination)</li> <li>• identify situations in which the different types of</li> </ul>

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	<ul style="list-style-type: none"> <li>- checklists</li> <li>- accident reports</li> <li>- WorkCover NSW notification</li> <li>- registers/logs/files.</li> </ul> <p>How and when to report.</p>	<p>reporting should occur.</p> <p>Review a range of sample work place documents for recording/reporting incidents.</p> <p>Complete sample written form.</p> <p>[Link to Task 11]</p> <p>Case studies – review a range of scenarios and identify when and how the issue/s should be reported.</p> <p>[Link to Task 4]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>1 Follow safe work practices</b></p> <p>1.8 Emergency equipment is identified and appropriate use is demonstrated.</p> <p><b>3 Follow emergency procedures</b></p> <p>3.1 Appropriate personnel and emergency services and means of contacting them in the event of an incident can be identified.</p> <p>3.2 Emergency and evacuation procedures are understood and carried out where required.</p> <p>3.3 Company evacuation procedures are followed in case of an emergency.</p>	<p><b>Emergency situations</b></p> <p>Emergency situations:</p> <ul style="list-style-type: none"> <li>• bomb threats</li> <li>• accidents/serious injury</li> <li>• robbery</li> <li>• fire</li> <li>• armed hold-up</li> <li>• natural disasters.</li> </ul>	<p>Brainstorm – types of emergency situations that may affect a manufacturing, engineering and related services industries workplace.</p> <p>Class discussion – the ways in which people, both employees and visitors, might react to emergency situations.</p> <p>Small group work:</p> <ul style="list-style-type: none"> <li>• allocate an emergency situation to each group</li> <li>• for each emergency situation, students are to develop a mind map identifying the potential risks they may pose</li> <li>• groups report back to the class.</li> </ul> <p>Internet activity – access the ‘schools’ section of the Emergency Management Australia’s website to discover types of emergency events in NSW or the local area:  <a href="http://www.ema.gov.au/agd/ema/emaSchools.nsf">http://www.ema.gov.au/agd/ema/emaSchools.nsf</a>.</p>

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	<p>Procedures to follow in the event of an emergency:</p> <ul style="list-style-type: none"> <li>• notification:               <ul style="list-style-type: none"> <li>- appropriate authorities (emergency services and WorkCover NSW)</li> <li>- colleagues</li> <li>- supervisor</li> </ul> </li> <li>• workplace/company policies and procedures:               <ul style="list-style-type: none"> <li>- evacuate</li> <li>- secure building</li> </ul> </li> <li>• reporting.</li> </ul>	<p>View a copy of the school’s policies/procedures for dealing with emergencies:</p> <ul style="list-style-type: none"> <li>• identify the roles of each participant in the emergency plan</li> <li>• how would these differ in a manufacturing, engineering and related services industries environment?</li> </ul> <p>Work placement activity – obtain a copy of your employer’s documentation for dealing with emergencies. [Link to Task 1]</p> <p>Develop an emergency plan and flow chart of procedures for dealing with emergencies to be displayed in the school workshop or a workplace.</p> <p>Practical task: evacuation of a site through simulated response to an emergency complying with workplace procedures. [Task 7]</p>
<p><i>MEM13014A Apply principals of occupational health and safety in the work environment</i></p> <p><b>3 Follow emergency procedures</b></p> <p>3.1 Appropriate personnel and emergency services and means of contacting them in the event of an incident can be identified.</p> <p>3.2 Emergency and evacuation procedures are understood and carried out where required.</p> <p>3.3 Company evacuation procedures are followed in case of an emergency.</p>	<p><b>Assistance in an emergency</b></p> <p>The importance of acting within level of authority in terms of:</p> <ul style="list-style-type: none"> <li>• taking initiative</li> <li>• problem-solving</li> <li>• decision-making.</li> </ul> <p>How and when to seek assistance.</p> <p>A basic awareness of the roles of appropriate personnel:</p> <ul style="list-style-type: none"> <li>• first aid officer</li> <li>• OHS safety officer/safety representative</li> <li>• OHS committee member</li> <li>• colleagues</li> </ul>	<p>Class discussion</p> <p>Case studies – to assist students to distinguish their roles and responsibilities and those of other personnel in a range of situations within the school environment and while on work placement.</p> <p>Brainstorm – list a range of organisations and/or personnel who may be called upon in an emergency situation.</p> <p>Handout – outlining the main role of relevant personnel.</p> <p>From the various emergency situations discussed earlier, identify to whom (and in which order) they should be reported.</p>

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	<ul style="list-style-type: none"> <li>• workplace manager</li> <li>• supervisor</li> <li>• emergency services</li> <li>• WorkCover NSW</li> <li>• union representative.</li> </ul> <p>Knowledge of emergency contact numbers:                      ‘000’ – landline number                      ‘112’ – mobile phones.</p> <p>An awareness of information required by emergency services attending the workplace site:</p> <ul style="list-style-type: none"> <li>• location</li> <li>• nearest cross-street</li> <li>• nature of the incident</li> <li>• number of casualties</li> <li>• nature of injuries</li> <li>• contact name and number.</li> </ul>	<p>Guest speaker – emergency personnel to discuss with the students the role of emergency services and other personnel in an emergency situation.                      [Link to Task 7]</p> <p>Discuss the use and misuse of emergency numbers.</p> <p>Role play – reporting of an emergency situation to the appropriate emergency service. [Task 7]</p>