

# LESSON PLAN

**LESSON PLAN NUMBER: 2**

**Department: AMA Phase 2 Core Mechanical**

**Aim:** To gain knowledge, understanding and experience of Machine Shop Appreciation & Maintenance.

To gain knowledge, understanding and experience of workshop safety.

**Topic:** Phase 2 Core Mechanical CME27-Workshop Safety Procedures & Practice, CME29- Machine Shop Appreciation.

**Previous Knowledge:** Phase 1

Target Time	Record of Achievement Reference	Objectives/Content	Tutor Activity	Learner Activity	Resources		Assessment
					Handouts	Equipment	
Session 1 1.40 hrs  (Subject to TTE Lunch & Break Rota)	Phase 1 ROA Module MS2 Measurement Units Imperial & Metric <b><u>Imperial refresher</u></b>	Objective 1 - <b><i>(The imperial systems of measurement)</i></b> Fractions and decimals within the imperial system  The imperial angular units Degrees, Minutes & Seconds How to make conversions from one system to the other using both mental arithmetic & calculators  The use of reference tables	Set out the days objectives Demonstration/ explanation Encourage discussion on different examples and how different cultures / <b><u>generations</u></b> use different measurement techniques Explanation/demonstration of how to guesstimate Demonstrate/Explanation of methods of reading micrometer scales & Vernier scales Recap session	Identify the objectives for the day Observe, listen, ask and answer questions take notes Practical exercise discussion	<a href="#">Conversions</a>  <a href="#">Reading Vernier Scales</a>	Classroom (IWB)  Reference tables - (Zeus Book) Calculators <a href="#">Presentation</a>	Observation Q&A
Session 2 1.40 hrs  (Subject to TTE Lunch & Break Rota)	Phase 1 ROA Module MS2 Measurement Units <b><u>Imperial refresher</u></b>  Module MS3 operation of vernier measuring equipment	Objective 2 <b><i>(Undertaking Engineering Calculations Non calculator)</i></b> <b><i>(Planning)</i></b> Using Mathematical functions - Trigonometry to establish omitted detail on the required component (Hex Bolt)	Recap/ Bridge last session, intro this session Demonstrate engineering calculations Ask open & Targeted questions Give strategies for working out equations without the aid of calculators Technical support Discuss planning	Observe, listen, ask and answer questions Complete the required calculations to establish the diameter of the workpiece for the Hex Bolt Produce work plan	<a href="#">Planning Sheet</a> Trigonometric tables	Classroom (IWB) Reference tables - (Zeus Book)  Micrometers How to Read an Inch Micrometer ( <a href="#">Video</a> ) Vernier Instruments How to Read a Vernier Calliper ( <a href="#">Video</a> )	Observation Q&A Written (calculations) Written (Planning Sheet)

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Session 3 1.40 hrs  (Subject to TTE Lunch & Break Rota)	<b>CME27</b> <b><u>Workshop Safety</u></b> <b><u>Procedures &amp;</u></b> <b><u>Practice</u></b> Within the mechanical areas	Objective 3 ( <i>Workshop Safety</i> ) Maintaining safety of self (and others) Personal protection equipment Statutory regulations & TTE standards Documentation Housekeeping Team Leader responsibilities	State objectives Presentation Explain the hierarchy of risk Explain the control measures. Tool-Box Talk Promote discussion Ask open & targeted questions Recap session	Observe, listen, ask and answer questions  Group discussion Observation Feedback Undertake risk assessments	<a href="#">H&amp;S Documentation</a>  <a href="#">HSG-129</a>	Interactive white board ( <b>IWB</b> ) PowerPoint <a href="#">Presentation</a>	Observation Q&A Self Assess - ( <i>Risk Assessment</i> )
Session 4 1.40 hrs  (Subject to TTE Lunch & Break Rota)	<b>CME27</b> <b><u>Workshop Safety</u></b> <b><u>Procedures &amp;</u></b> <b><u>Practice</u></b> Within the mechanical areas	Objective 4 ( <i>Workshop Safety Cont'd</i> ) Safety systems & equipment Tool and Machinery Hazards Securing the workpiece Changing Holding Devices Safe systems of work The risk Assessment process Clean-up – Removal of tools etc	State objectives Presentation Explanation Ask open & targeted questions Promote discussion Recap session	Observe, listen, ask and answer questions		<b>IWB</b> ) PowerPoint <a href="#">Presentation</a>	Observation Q&A

Equality & Diversity	Differentiated Learning Activities (Highlight or tick where applicable)
<p><b><u>Challenge stereotypes by:</u></b></p> <ul style="list-style-type: none"> <li>• Using non discriminatory language.</li> <li>• Using diverse images, names &amp; scenarios.</li> </ul> <p><b><u>Promote a positive learning environment by:</u></b></p> <ul style="list-style-type: none"> <li>• Being a positive role model.</li> <li>• Encouraging collaborative work.</li> <li>• Valuing individual characteristics and experiences.</li> <li>• Encouraging learners to participate.</li> <li>• Nurturing mutual respect.</li> <li>• Promoting positive behaviour.</li> </ul> <p><b><u>Promote inclusion by:</u></b></p> <ul style="list-style-type: none"> <li>• Anticipating and addressing potential barriers to learning.</li> <li>• Using accessible resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Mix of individual, paired and group work. <input type="checkbox"/></li> <li>• Variety of activities for different learning styles. <input type="checkbox"/></li> <li>• Learner support. <input type="checkbox"/></li> <li>• Targeted differentiated questioning to check learning with prompts/leads to support less able learners. <input type="checkbox"/></li> </ul> <p><b><u>Specific Differentiation activities:</u></b></p> <ul style="list-style-type: none"> <li>• By Extension <input type="checkbox"/> (For example additional practical tasks after completion of ROA content for the most able)</li> <li>• By Group Work <input type="checkbox"/> (For example grouping learners of mixed ability y to support each other within the peer group)</li> <li>• By Content. <input type="checkbox"/> (For example study different materials within the same topic area)</li> <li>• By Activities. <input type="checkbox"/> (For example study the same content but do different activities)</li> <li>• By Gradation <input type="checkbox"/> ( for example the same information and activities are given as the activity becomes progressively more difficult only the more able complete the difficult tasks)</li> </ul>
<p align="center"><b>Individual Learner / Group Targeted Needs / Strategies</b> (List details where applicable)</p>	