

# COMPETENCY STANDARDS

## GUNSMITHING SERVICES LEVEL I



### METALS AND ENGINEERING SECTOR

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**  
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# COMPETENCY STANDARDS FOR GUNSMITHING SERVICES LEVEL I

## SECTION 1 DEFINITION OF QUALIFICATION

The **GUNSMITHING SERVICES LEVEL I** qualification consists of competencies that a person must achieve to demonstrate gun safety rules and fundamentals of marksmanship, perform preparatory activities, assemble and disassemble various firearms—limited to M1911s, striker-fired pistols, revolvers, and rifles—and conducting basic maintenance and cleaning firearms platforms.

The units of competency comprising this qualification include the following:

<b>Unit Code</b>	<b>BASIC COMPETENCIES</b>
400311101	Receive and respond to workplace communication
400311102	Work with others
400311103	Solve/address routine problems
400311104	Enhance self-management skills
400311105	Support innovation
400311106	Access and maintain information
400311107	Follow occupational safety and health policies and procedures
400311108	Apply environmental work standards
400311109	Adopt entrepreneurial mindset in the workplace

<b>Unit Code</b>	<b>COMMON COMPETENCIES</b>
MEE722201	Apply safety practices
MEE722202	Interpret working drawings and sketches
MEE722203	Select and cut workshop materials
MEE722204	Perform shop computations (Basic)
MEE722205	Measure workpiece (Basic)
MEE722206	Perform routine housekeeping
MEE722211	Perform preventive and corrective maintenance

<b>Unit Code</b>	<b>CORE COMPETENCIES</b>
AB-MEE1374020722301	Demonstrate firearms safety rules and fundamentals of marksmanship
AB-MEE1374020722302	Perform preparatory activities for Gunsmithing
AB-MEE1374020722303	Assemble and disassemble firearms
AB-MEE1374020722304	Perform Firearms maintenance and cleaning

A person who has achieved this qualification is competent to be:

- Firearms Servicing Assistant
- Gunsmithing Helper
- Firearms Maintenance Worker
- Junior Gunsmith

## SECTION 2 COMPETENCY STANDARD

This section gives the details of the contents of the units of competency required in **GUNSMITHING SERVICES LEVEL I**.

### BASIC COMPETENCIES

**UNIT OF COMPETENCY : RECEIVE AND RESPOND TO WORKPLACE COMMUNICATION**

**UNIT CODE : 400311101**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to receive, respond and act on verbal and written communications.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Follow routine spoken messages	1.1 Required information is gathered by listening attentively and correctly interpreting or understanding information/ instructions. 1.2 Instructions/ information are recorded in accordance with workplace requirements. 1.3 Instructions are acted upon immediately in accordance with information received. 1.4 Clarification is sought from the workplace supervisor on all occasions when any instruction/ information is not clear Verbal and	1.1 Organizational policies/ guidelines in regard to processing internal/external information 1.2 Ethical work practices in handling communications 1.3 Overview of the Communication process 1.4 Effective notetaking and questioning techniques	1.1 Conciseness in receiving and clarifying messages/ information/ communication 1.2 Accuracy in recording messages/ information 1.3 Basic communication skills 1.4 Active-listening Skills 1.5 Note-taking skills 1.6 Clarifying and probing questions (questioning skills)

	written reporting is undertaken when required.		(clarifying and probing)
2. Perform workplace duties following written notices	<p>2.1 <b>Written notices and instructions</b> are read and interpreted correctly in accordance with <b>organizational guidelines</b>.</p> <p>2.2 Routine written instructions are followed in sequence.</p> <p>2.3 Feedback is given to the workplace supervisor based on the instructions/information received.</p>	<p>2.1 Organizational guidelines in regard to processing internal/external information</p> <p>2.2 Ethical work practices in handling communications</p> <p>2.3 Overview of the Communication process</p> <p>2.4 Effective questioning techniques (clarifying and probing)</p>	<p>2.1 Conciseness in receiving and clarifying messages/information/communication</p> <p>2.2 Accuracy in recording messages/information</p> <p>2.3 Clarifying and probing questions (Questioning Skills)</p> <p>2.4 Skills in reading and recording and labeling data</p> <p>2.5 Skills in locating information</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Written notices and instructions	May include: <ol style="list-style-type: none"> <li>1.1. Written work instructions</li> <li>1.2. Internal memos/memorandum</li> <li>1.3. Business letters</li> <li>1.4. External communications</li> <li>1.5. Electronic mail</li> <li>1.6. Briefing notes</li> <li>1.7. General correspondence</li> <li>1.8. Marketing materials</li> <li>1.9. Guidelines/Circulars</li> </ol>
2. Organizational guidelines	May include: <ol style="list-style-type: none"> <li>1. Information documentation procedures</li> <li>2. Company guidelines and procedures</li> <li>3. Standard Operating Procedure (SOPs)</li> <li>4. Organization manuals</li> <li>5. Departmental Policies and Procedures Manual</li> <li>6. Service manual</li> </ol>

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: <ol style="list-style-type: none"> <li>1.1 Demonstrated knowledge and understanding of organizational procedures in handling verbal and written communications</li> <li>1.2 Received and acted on verbal messages and instructions correctly and efficiently</li> <li>1.3 Demonstrated ability in recording instructions/information</li> <li>1.4 Utilized effective clarifying and probing techniques where necessary</li> </ol>
2. Resource Implications	The following resources should be provided: <ol style="list-style-type: none"> <li>2.1 Pens</li> <li>2.2 Notepads</li> <li>2.3 Computer (if applicable)</li> </ol>
3. Methods of Assessment	Competency in this unit may be assessed through: <ol style="list-style-type: none"> <li>3.1. Demonstration on communication skills (e. g., role- playing)</li> <li>3.2. Oral questioning /Interview</li> <li>3.3. Written Test</li> </ol>
4. Context for Assessment	4.1. Competency may be assessed individually in the actual workplace or in a simulated environment in TESDA-accredited institution

**UNIT OF COMPETENCY : WORK WITH OTHERS**

**UNIT CODE : 400311102**

**UNIT DESCRIPTOR :** This unit covers the skills, knowledge and attitudes required in working as a member of a team, interacting with co-members and performing one’s role in the team.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Develop effective workplace relationships	1.1 <b>Duties and responsibilities</b> are done in a positive manner to promote cooperation and good relationships. 1.2 Assistance is sought from the workgroup when difficulties arise and addressed through discussions. 1.3 <b>Feedback</b> provided by others in the team is encouraged, acknowledged and acted upon. 1.4 Differences in personal values and beliefs are respected and acknowledged during interaction	1.1 One’s role, duties and responsibilities in the workplace 1.2 Acknowledging/ receiving and giving feedback 1.3 Valuing respect and empathy in the workplace 1.4 Workplace communication protocols 1.5 Teamwork 1.6 Collaboration and teambuilding within the enterprise	1.1 Communication skills – oral and written (e. g., requesting advice, receiving feedback) 1.2 Ability to relate to/interact with people from a range of social and cultural backgrounds
2. Contribute to work group activities	2.1 <b>Support is provided to team members</b> to ensure workgroup goals are met. 2.2 Constructive contributions to workgroup goals and tasks are made according to <b>organizational requirements</b> . 2.3 Information relevant to work is shared with team members to ensure designated	2.1 Importance of creative collaboration, social perceptiveness and problem sensitivity in the workplace 2.2 Organizational requirements 2.3 importance of initiative and dedication in group process	2.1 Communication skills – oral and written (e. g., requesting advice, receiving feedback) 2.2 Organizing work priorities and arrangements 2.3 Team player skills 2.4 Technology

	goals are met	2.4 Office and workplace technologies and automation (hardware, software systems)	skills including the ability to select and use technology appropriate to a task
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Duties and responsibilities	May include: <ul style="list-style-type: none"> <li>1.1. Job description and employment arrangements</li> <li>1.2. Organization's policy relevant to work role</li> <li>1.3. Organizational structures</li> <li>1.4. Supervision and accountability requirements including OHS</li> <li>1.5. Enterprise code of conduct</li> </ul>
2. Work group	May include: <ul style="list-style-type: none"> <li>2.1 Supervisor or manager</li> <li>2.2 Peers/work colleagues and clients</li> <li>2.3 Other members of the organization</li> </ul>
3. Feedback	May include: <ul style="list-style-type: none"> <li>3.1 Formal/Informal performance appraisal</li> <li>3.2 Obtaining feedback from supervisors and colleagues and clients</li> <li>3.3 Personal, reflective behavior strategies</li> <li>3.4 Routine organizational methods for monitoring service delivery</li> </ul>
4. Providing support to team members	May include: <ul style="list-style-type: none"> <li>4.1 Explaining/clarifying</li> <li>4.2 Helping colleagues</li> <li>4.3 Providing encouragement</li> <li>4.4 Providing feedback to another team member</li> <li>4.5 Undertaking extra tasks if necessary</li> </ul>
5. Organizational requirements	May include: <ul style="list-style-type: none"> <li>5.1 Goals, objectives, plans, system and processes</li> <li>5.2 Legal and organization policy/guidelines</li> <li>5.3 OHS policies, procedures and programs</li> <li>5.4 Ethical standards</li> <li>5.5 Defined resources parameters</li> <li>5.6 Quality and continuous improvement processes and standards</li> </ul>

## EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Provided support to team members to ensure goals are met</li> <li>1.2 Acted on feedback from clients and colleagues</li> <li>1.3 Demonstrated quality/active participation in team meetings and activities</li> </ul>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place</li> <li>2.2 Materials relevant to the proposed activity or task</li> </ul>
<p>3. Methods of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Written Test</li> <li>3.2 Role play</li> <li>3.3 Interview/Oral Questioning</li> <li>3.4 Structured and unstructured activity</li> </ul>
<p>4. Context for Assessment</p>	<ul style="list-style-type: none"> <li>4.1 Competency assessment may occur in workplace or any appropriately simulated environment.</li> <li>4.2 Assessment shall be observed while task is being undertaken whether individually or in group</li> </ul>

**UNIT OF COMPETENCY : SOLVE/ADDRESS ROUTINE PROBLEMS**

**UNIT CODE : 400311103**

**UNIT DESCRIPTOR :** This unit of covers the knowledge, skills and attitudes required to solve problems in the workplace including the application of problem- solving techniques and to determine and resolve the root cause of routine problems.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify the problem	1.1 Desired operating/output parameters and expected quality of products/services are identified. 1.2 The nature of the problem by observation on routines is defined. 1.3 <b>Problems</b> are clearly stated and specified clearly.	1.1 Competence includes mastery of knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations 1.2 Competence to include the ability to apply and explain fundamental causes of problems routine problems and to determine the corrective actions. 1.3 Relevant equipment and operational processes. 1.4 Enterprise goals, targets and measures. 1.5 Enterprise quality OHS and environmental requirement. 1.6 Enterprise	1.1 Using a range of formal problems-solving techniques (e.g., planning, attention, simultaneous and successive processing of information). 1.2 Identifying and clarifying the nature of the problem.

		<p>information systems and data collation</p> <p>1.7 Industry codes and standards.</p>	
<p>2. Assess fundamental causes of the problem</p>	<p>2.1 Problem-solving tool appropriate to the problem and the context is selected.</p> <p>2.2 Possible causes based on experience and the use of problem-solving tools/<b>basic analytical techniques</b> are identified.</p> <p>2.3 Possible fundamental causes of problems are specified.</p>	<p>2.1 Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations.</p> <p>2.2 Competence to include the ability to apply and explain fundamental causes of problems, routine problems and to determine the corrective actions.</p> <p>2.3 Relevant equipment and operational processes.</p> <p>2.4 Enterprise goals, targets and measures.</p> <p>2.5 Enterprise quality, OSH and environmental requirements.</p> <p>2.6 Enterprise information systems and data collation.</p> <p>2.7 Industry codes and standards.</p>	<p>2.1 Using range of formal problem-solving techniques (e.g., planning, attention, simultaneous and successive processing of information).</p> <p>2.2 Identifying extent and causes of procedural problems.</p>

<p>3. Determine corrective action</p>	<p>3.1 All possible options are considered for resolution of the routine problem.</p> <p>3.2 Corrective actions are determined to resolve the problem and possible future causes.</p> <p>3.3 Corrective actions are determined to resolve the problem and possible future causes.</p> <p>3.4 <b>Action plans</b> are developed identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures.</p>	<p>3.1 Competence includes a thorough knowledge &amp; understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations</p> <p>3.2 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations</p> <p>3.3 Relevant equipment and operational processes</p> <p>3.4 Enterprise goals, targets and measures</p> <p>3.5 Enterprise quality OSH and environmental requirement</p> <p>3.6 Principles of decision making strategies and techniques</p> <p>3.7 Enterprise information systems and data collation</p> <p>3.8 Industry codes and standards</p>	<p>3.1 Using a range of formal problem-solving techniques.</p> <p>3.2 Identifying and clarifying the nature of the problem.</p> <p>3.3 Devising and applying the best possible solution to a problem.</p> <p>3.4 Evaluating the solution.</p>
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<p>4. Communicate action plans and recommendations to routine problems</p>	<p>4.1 Report on recommendations is prepared.</p> <p>4.2 Recommendations are presented to <b>appropriate person</b>.</p> <p>4.3 Recommendations are followed-up, if required.</p>	<p>4.1 Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations</p> <p>4.2 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations</p> <p>4.3 Relevant equipment and operational processes</p> <p>4.4 Enterprise goals, targets and measures</p> <p>4.5 Enterprise quality, OSH and environmental requirement</p> <p>4.6 Principles of decision-making strategies and techniques</p> <p>4.7 Enterprise information systems and data collation</p> <p>4.8 Industry codes and standards</p>	<p>4.1 Using a range of formal problem solving techniques.</p> <p>4.2 Identifying and clarifying the nature of the problem.</p> <p>4.3 Devising the best possible solution to a routine problem.</p> <p>4.4 Evaluating the solution.</p> <p>4.5 Developing action plans to resolving and managing routine problems</p>
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## RANGE OF VARIABLES

VARIABLES	RANGE
1. Problem	May include: 1.1 Routine/non – routine processes and quality problems 1.2 Equipment selection, availability and failure 1.3 Teamwork and work allocation problem 1.4 Safety and emergency situations and incidents
2. Basic analytical techniques	May include: 2.1. Brainstorming 2.2. Case Analysis 2.3. Cause and effect diagrams 2.4. Pareto analysis 2.5. SWOT analysis 2.6. Gant chart, Pert CPM and graphs 2.7. Scattergrams
3. Action plans	May include: 3.1. Priority requirements 3.2. Measurable objectives 3.3. Resource requirements 3.4. Timelines 3.5. Co-ordination and feedback requirements 3.6. Safety requirements 3.7. Risk assessment 3.8. Environmental requirements
4. Appropriate Person	May include: 4.1. Supervisor or manager 4.2. Peers/work colleagues Other members of the organization

## EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1. Identified the problem.</li> <li>1.2. Determined the fundamental causes of the problem.</li> <li>1.3. Determined the correct / preventive action.</li> <li>1.4. Developed action plans in managing routine problems.</li> </ol> <p>These aspects may be best assessed using project-based learning mode of assessment and case formulation..</p>
<p>2. Resource Implications</p>	<p>Assessment will require access to a workplace over an extended period, or a suitable method of gathering evidence of operating ability over a range of situations.</p>
<p>3. Methods of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <ol style="list-style-type: none"> <li>3.1. Case Formulation</li> <li>3.2. Life Narrative Inquiry (Interview)</li> <li>3.3. Standardized test</li> </ol> <p>The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.</p>
<p>4. Context for Assessment</p>	<p>Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.</p>

**UNIT OF COMPETENCY : ENHANCE SELF-MANAGEMENT SKILLS**

**UNIT CODE : 400311104**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills, and attitudes in applying the ability to regulate actions, make good decisions, and show appropriate behavior based on self-awareness.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Set personal and career goals	1.1 The difference between <b><i>personal</i></b> and <b><i>career goals</i></b> are described. 1.2 Clear and concise personal and career goals are developed 1.3 Characteristics of motivational goals according to Locke & Latham are identified.	1.1 Definition of personal goals and career goals 1.2 SMART Model for goal setting 1.3 Five principles of goal setting according to Locke & Latham (Clarity, Challenge, Commitment, Feedback, and Task complexity)	1.1 Setting of personal and career goals 1.2 Defining, creating, and mapping personal and career goals using SMART Model for goal setting 1.3 Applying goal setting principles to personal and career goals

<p>2. Recognize emotions</p>	<p>2.1 Influence that people, situations and events have on <b>emotions</b> are described</p> <p>2.2 Importance of responding with appropriate emotions are explained</p> <p>2.3 Influences on and consequences of emotional responses in a <b>social and work-related contexts</b> are examined.</p>	<p>2.1 Common positive and negative emotions manifested in the workplace</p> <p>2.2 Professional and non-professional behaviors in the workplace</p> <p>2.3 Triggers and implications of positive and negative emotions in the workplace</p>	<p>2.1 Identifying sensitively the positive and negative emotions in the workplace</p> <p>2.2 Responding with appropriate emotions in the workplace</p> <p>2.3 Identifying possible consequences of inappropriate emotional responses in a social and work-related context</p>
<p>3. Describe oneself as a learner</p>	<p>3.1 Factors and strategies that assist learning are identified and described</p> <p>3.2 Preferred <b>learning styles</b> according to VAK Learning Style Model and Kolb's Theory of Learning Styles are identified</p> <p>3.3 Range of <b>learning strategies</b> appropriate to specific tasks and describe work practices that assist their learning are identified and chosen.</p>	<p>3.1 Kolb's Theory of Learning Styles (Converger, Diverger, Assimilator, Accommodator)</p> <p>3.2 VAK Learning Style Model (Visual, Auditory, Kinesthetic)</p> <p>3.3 Range of learning strategies appropriate to specific tasks and describe work practices that assist their learning</p>	<p>3.1 Identifying factors and strategies that assist learning</p> <p>3.2 Applying learning styles to positively influence school/work performance</p> <p>3.3 Using appropriate learning strategies to improve study habits and learning</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Personal goals	May include: 1.1 Graduate from Tech-Voc training 1.2 Buy a car 1.3 Travel around the world
2. Career goals	May include : 2.1 Graduate from Tech-Voc training 2.2 Graduate from college 2.3 Buy a car 2.4 Retire at 50 years' old
3. Emotions	Positive emotions may include: 3.1 Joy 3.2 Gratitude 3.3 Hope 3.4 Serenity  Negative emotions may include: 3.5 Anger 3.6 Fear 3.7 Disgust 3.8 Sadness
4. Social and work-related contexts	May include professional behavior such as: 4.1 Committed to developing and improving their skills 4.2 Professionals get the job done 4.3 They keep their word and deliver what they promise.  May include non-professional behavior such as– 4.4 They engage in office politics 4.5 Bluffing and misrepresenting their skills 4.6 Blaming a colleague

5. Learning styles	May include: 5.1 Visual 5.2 Auditory 5.3 Kinesthetic 5.4 Converger 5.5 Diverger 5.6 Assimilator 5.7 Accommodator
6. Learning strategies	May include: 6.1 Explain and describe ideas with many details 6.2 Switch between ideas while studying 6.3 Use specific examples to understand abstract Ideas

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Developed SMART personal and career goals 1.2 Applied goal setting principles 1.3 Identified sensitively the positive and negative emotions in the workplace 1.4 Responded with appropriate emotions in the workplace 1.5 Identified possible consequences of inappropriate emotional responses in a social and work-related context 1.6 Applied learning styles to positively influence school/work performance 1.7 Developed reflective practice through realization of limitations, likes/ dislikes; through showing of self-confidence
2. Resource Implications	The following resources should be provided: 2.1 Access to workplace and resources
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration or simulation with oral questioning (ex. how to recognize emotions) 3.2 Case problems involving workplace diversity issues 3.3 Third-party report
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment

**UNIT OF COMPETENCY : SUPPORT INNOVATION**

**UNIT CODE : 400311105**

**UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to identify, recognize and support innovation.**

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify the need for innovation in one's area of work	1.1 The value of <b><i>innovative practices</i></b> in the workplace is recognized. 1.2 Creativity in <b><i>innovation</i></b> in one's scope of work is applied. 1.3 The need for innovation in own scope of work is recognized.	1.1 Clear-cut definition of innovation 1.2 Current practice in own scope of work 1.3 Workplace procedures	1.1 Contributing in brainstorming session 1.2 Examining current practice in one's scope of work 1.3 Identifying issues and concerns of one's scope of work

<p>2. Recognize innovative and creative ideas</p>	<p>2.1 Opportunities within the team are identified to develop innovation.</p> <p>2.2 Creative ideas of coworkers pertaining to work practices are analyzed.</p> <p>2.3 Environment conducive for learning and innovating is maintained.</p>	<p>2.1 Support required to generate creative ideas</p> <p>2.2 Difference between innovation and creativity</p> <p>2.3 Innovative climate in one's scope of work.</p>	<p>2.1 Identifying resources required for creativity and innovation</p> <p>2.2 Examining potential obstacles to and opportunities for creativity and innovation</p> <p>2.3 Communicating creative ideas of co-workers.</p>
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<p>3. Support individuals' access to flexible and innovative ways of working</p>	<p>3.1 Individuals and key people are reinforced to identify innovative ideas to achieve outcomes.</p> <p>3.2 Sharing of best practices using flexible and innovative ways of working is accomplished.</p> <p>3.3 Obstacles to progress in implementing flexible and innovative ways of working are recognized.</p>	<p>3.1 The role of employees/workers in the improvement of practices in the organization</p> <p>3.2 Best practices using flexible and innovative ways of working</p> <p>3.3 Obstacles in implementing innovation in one's scope of work.</p>	<p>3.1 Encouraging co-workers to generate and develop ideas</p> <p>3.2 Evaluating potential obstacles to and opportunities for creativity and innovation</p> <p>3.3 Sharing of best practices related to innovation and creativity</p>
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## RANGE OF VARIABLES

<b>VARIABLE</b>	<b>RANGE</b>
1. Innovative practices	May include: 1.1 Self-directed support 1.2 Community based services 1.3 Working within a collaborative arrangement 1.4 Making scope of work more efficient
2. Innovation	May include: 2.1 New ideas 2.2 Original ideas 2.3 Different ideas 2.4 Methods or tools

## EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1 Identified need for innovation in the area of work</li> <li>1.2 Recognized innovative and creative ideas</li> <li>1.3 Pursued agreement for flexible and innovative ways of working</li> <li>1.4 Supported individuals and people to access flexible and innovative ways of working.</li> </ol>
<p>2. Resource Implications</p>	<p>Specific resources for assessment</p> <ol style="list-style-type: none"> <li>2.1 Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment.</li> </ol>
<p>3. Methods of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <ol style="list-style-type: none"> <li>3.1 Written Test</li> <li>3.2 Interview</li> </ol> <p>The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.</p>
<p>4. Context for Assessment</p>	<ol style="list-style-type: none"> <li>4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.</li> </ol>

**UNIT OF COMPETENCY** : **ACCESS AND MAINTAIN INFORMATION**

**UNIT CODE** : **400311106**

**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes required to identify, gather, interpret and maintain information.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify and gather needed information	1.1 Required <b>information</b> is identified based on requirements. 1.2 Sources to produce required information are identified and accessed. 1.3 Report information is collected, organized and recorded. 1.4 Organize information is collected in a way that enables easy access and retrieval by other staff	1.1 Policies, procedures and guidelines relating to information handling in the public and private sector, including confidentiality, privacy, security, freedom of information 1.2 Data collection and management procedures 1.3 Cultural aspects of information and meaning 1.4 Sources of public sector work-related information 1.5 Public/private sector standards	1.1 Handling policies, procedures and guidelines relating to information handling in the public sector, including confidentiality, privacy, security, freedom of information 1.2 Collecting data and managing procedures 1.3 Practicing cultural aspects of information and meaning 1.4 Using public/private sector standards

<p>2. Search for information on the internet or an intranet</p>	<p>2.1 Search engines are utilized to find and select appropriate information.</p> <p>2.2 Suitable techniques are used to make it easier to find useful information and to pass it on to others.</p> <p>2.3 Records are used where useful information came from.</p> <p>2.4 Results are used for searches of useful information.</p> <p>2.5 <b>Search engine</b> is chosen, appropriate for the information that is needed.</p> <p>2.6 Searches are carried out as per requirements.</p>	<p>2.1 Find and select appropriate information</p> <p>2.2 Techniques in finding useful information Records are used where useful information came from</p> <p>2.3 Search engines for information</p>	<p>2.1 Finding and selecting search engine to find and select appropriate information</p> <p>2.2 Using suitable techniques to find useful information easier</p> <p>2.3 Using records</p> <p>2.4 Carrying out Searches</p>
<p>3. Examine information</p>	<p>3.1 Information and its <b>sources</b> are evaluated for relevance and validity to business and/or client requirements.</p> <p>3.2 Information is examined as required to identify key issues.</p> <p>3.3 Detailed evaluation of information is carried out as required using relevant techniques including mathematical calculations.</p>	<p>3.1 Data evaluation procedures</p> <p>3.2 Cultural aspects of information and meaning</p> <p>3.3 Sources of public sector work-related information</p> <p>3.4 Public sector standards</p>	<p>3.1 Evaluating data</p> <p>3.2 Practicing cultural aspects of information and meaning</p> <p>3.3 Using public sector standards</p>

<p>4. Secure information</p>	<p>4.1 Basic file-handling techniques are used for the software</p> <p>4.2 Techniques is used to handle, organize and secure information</p>	<p>4.1 Policies, procedures and guidelines relating to information handling in the public sector, including confidentiality, privacy, security, freedom of information</p> <p>4.2 Basic file-handling techniques</p> <p>4.3 Techniques in handling, organizing and saving files</p> <p>4.4 Electronic and manual filing systems</p>	<p>4.1 Handling policies, procedures and guidelines relating to information handling in the public sector, including confidentiality, privacy, security, freedom of information</p> <p>4.2 Using basic file-handling techniques is used for the software</p> <p>4.3 Using different techniques in handling, organizing and saving files</p> <p>4.4 Using electronic and manual filing systems</p>
<p>5. Manage information</p>	<p>5.1 Information and records are maintained to ensure data and system integrity using a range of standard and complex information systems and operations.</p> <p>5.2 Routine data and records are reconciled as required.</p> <p>5.3 Inadequacies in system/s relating to information retrieval are identified and corrected or reported to relevant staff as required</p>	<p>5.1 Policies, procedures and guidelines relating to information handling in the public sector, including confidentiality, privacy, security, freedom of information</p> <p>5.2 Data collection and management procedures</p> <p>5.3 Organizational information handling and storage procedures</p> <p>5.4 Cultural aspects of information and meaning</p> <p>5.5 Sources of public sector work-related information</p> <p>5.6 Public sector standards</p>	<p>5.1 Handling policies, procedures and guidelines relating to information handling in the public sector, including confidentiality, privacy, security, freedom of information</p> <p>5.2 Collecting data and managing procedures</p> <p>5.3 Handling organizational information and storage procedures</p> <p>5.4 Practicing cultural aspects of information and meaning</p> <p>5.5 Using public sector standards</p> <p>5.6 Managing databases and data</p>

		5.7 Databases and data storage systems	storage systems
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Information	May include: 1.1. Property 1.2. Organizational 1.3. Technical reference
2. Search engine	May include but not limited to: 2.1 Crawler-based search engine 2.1.1 Google 2.1.2 AlltheWeb 2.1.3 AltaVista 2.2 Human-powered directories 2.2.1 Yahoo directory 2.2.2 Open directory 2.2.3 Looksmart
3. Sources	May include but not limited to: 3.1 Other IT systems 3.2 Manually created 3.3 Within own organization 3.4 Outside own organization 3.5 Geographically remote

## EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. Identified and gathered needed information</li> <li>1.2. Searched for information on the internet or an intranet</li> <li>1.3. Studied and interpreted information</li> <li>1.4. Handled files</li> <li>1.5. Maintained information</li> </ul>
<p>2. Resource Implications</p>	<p>Specific resources for assessment</p> <ul style="list-style-type: none"> <li>2.1 Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment</li> </ul>
<p>3. Methods of Assessment</p>	<p>Competency in this unit should be assessed through:</p> <ul style="list-style-type: none"> <li>3.1. Written Test</li> <li>3.2. Interview</li> <li>3.3. Portfolio</li> </ul> <p>The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.</p>
<p>4. Context for Assessment</p>	<ul style="list-style-type: none"> <li>4.1 In all workplaces, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.</li> </ul>

**UNIT OF COMPETENCY : FOLLOW OCCUPATIONAL SAFETY AND HEALTH POLICIES AND PROCEDURES**

**UNIT CODE : 400311107**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes to identify relevant occupational safety and health policies and procedures, perform relevant occupational safety and health procedures, and comply with relevant occupational safety and health policies and standards.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify relevant occupational safety and health policies and procedures	1.1 Related <b>occupational safety and health risks and hazards</b> are recognized based on <b>OSH work standards</b> . 1.2 <b>OSH requirements/regulations</b> towards work are determined in accordance with workplace policies and procedures. 1.3 <b>Incident/ Emergency procedures</b> relevant to the workplace are identified based on relevant OSH work standards.	1.1 Occupational safety and health risks and hazards 1.2 OSH work standards 1.3 Government approved Occupational Safety and Health Policies and regulations 1.4 Terms related to occupational safety and health 1.5 Workplace process and procedures 1.6 Standard emergency plan and procedures	1.1 Observation skills 1.2 Critical thinking skills 1.3 Communication skills
2. Perform relevant occupational safety and health procedures	2.1 Safety devices are checked in accordance with workplace OSH work standards. 2.2 <b>OSH Work instructions</b> are followed in accordance with workplace policies and procedures.* 2.1 <b>Personal protective equipment</b> , materials, ,	2.1 OSH Work instructions Personal protective equipment 2.2 Safe handling procedures of tools, equipment and materials 2.3 Standard emergency plan	2.1 Communication skills 2.2 Knowledge management 2.3 Organizing skills 2.4 Observation skills

	tools, machinery, and equipment are utilized according to OSH work standards	and procedures 2.4 Different OSH control measures 2.6 Standard accident and illness reporting procedures	
3. Comply with relevant occupational safety and health policies and standards	<p>3.1 <b>Preventive Control Measures</b> are identified in accordance with OSH work standards.</p> <p>3.2 OSH requirements are obeyed in accordance with workplace policies and procedures.</p> <p>3.3 Incident/ Emergency procedures are executed based on OSH Procedures.</p>	<p>3.1 OSH Preventive Control Measures</p> <p>3.2 Principles of 5S</p> <p>3.3 Environmental requirements relative to industrial wastes disposal</p> <p>3.4 OSH requirements relative to safe handling and disposal of materials</p> <p>3.5 Personal hygiene practices</p>	<p>3.1 Communication skills</p> <p>3.2 Knowledge management</p> <p>3.3 Organizing skills</p> <p>3.4 Critical thinking skills</p> <p>3.5 Observation skills</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Occupational Safety and Health Risks and Hazards	<p>May include:</p> <ul style="list-style-type: none"> <li>1.1 Physical hazards – impact, illumination, pressure, noise, vibration, extreme temperature, radiation</li> <li>1.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects</li> <li>1.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors</li> <li>1.4 Ergonomics</li> <li>1.5 Psychological factors – over exertion/ excessive force, awkward/static positions, fatigue, direct pressure, varying metabolic cycles</li> <li>1.6 Physiological factors – monotony, personal relationship, work out cycle</li> <li>1.7 Safety hazards (unsafe workplace condition) – confined space, excavations, falling objects, gas leaks, electrical, poor storage of materials and waste, spillage, waste and debris</li> <li>1.8 Unsafe workers’ act (Smoking in off-limited areas, Substance and alcohol abuse at work)</li> </ul>
2. OSH Work Standards	<p>May include:</p> <ul style="list-style-type: none"> <li>2.1 OSHS Rule 1090 Hazardous Materials</li> <li>2.2 OSHS Rule Gas &amp; Electric Welding and Cutting Operations</li> <li>2.3 OSHS Rule 1120 Hazardous Work Processes</li> <li>2.4 OSHS Rule 1150 Materials Handling &amp; Storage</li> <li>2.5 OSHS Rule 1180 Internal Combustion Engine</li> <li>2.6 OSHS Rule 1210 Electrical Safety</li> <li>2.7 OSHS Rule 1420 Logging</li> <li>2.8 OSHS Rule 1410 Construction Safety</li> <li>2.1 OSHS Rule 1950 Pesticides &amp; Fertilizers</li> </ul>
3. OSH Requirements/ Regulations	<p>May include:</p> <ul style="list-style-type: none"> <li>3.1 Clean Air Act</li> <li>3.2 Building code</li> <li>3.3 National Electrical and Fire Safety Codes</li> <li>3.4 Waste management statutes and rules</li> <li>3.5 Permit to Operate</li> <li>3.6 Philippine Occupational Safety and Health Standards</li> <li>3.7 Department Order No. 13 (Construction Safety and Health)</li> <li>3.8 ECC regulations</li> <li>3.9 Republic Act No. 11058 – An Strengthening Compliance with Occupational Safety and Health</li> </ul>

<p>4. Incident and Emergency Procedures</p>	<p>May include:</p> <ul style="list-style-type: none"> <li>4.1 Chemical spills</li> <li>4.2 Equipment/vehicle accidents</li> <li>4.3 Explosion</li> <li>4.4 Fire Drill</li> <li>4.5 Gas leak</li> <li>4.6 Injury to personnel</li> <li>4.7 Structural collapse</li> <li>4.8 Earthquake drill</li> <li>4.9 Toxic and/or flammable vapors emission</li> <li>4.10 Evacuation</li> <li>4.11 Isolation</li> <li>4.12 Basic life support/CPR</li> <li>4.13 Decontamination</li> <li>4.14 Calling designated emergency personnel</li> </ul>
<p>5. OSH Work Instructions</p>	<p>May include:</p> <ul style="list-style-type: none"> <li>5.1 Worker's Participation Policies</li> <li>5.2 Company Environment Safety and Health Policies</li> <li>5.3 Continual OSH Improvement Instructions</li> <li>5.4 Education and Training</li> <li>5.5 Safety and Health Policy Statements</li> <li>5.6 Mission and Vision Statements</li> <li>5.7 Operating Instructions and Policies</li> </ul>
<p>6. Personal Protective Equipment</p>	<p>May include:</p> <ul style="list-style-type: none"> <li>6.1 Arm/Hand guard, gloves</li> <li>6.2 Eye protection (goggles, shield)</li> <li>6.3 Hearing protection (ear muffs, ear plugs)</li> <li>6.4 Hair Net/cap/bonnet</li> <li>6.5 Hard hat</li> <li>6.6 Face protection (mask, shield)</li> <li>6.7 Apron/Gown/coverall/jump suit</li> <li>6.8 Anti-static suits</li> <li>6.9 High-visibility reflective vest</li> </ul>
<p>7. Preventive Control Measures</p>	<p>May include:</p> <ul style="list-style-type: none"> <li>7.1 Eliminate the hazard (i.e., get rid of the dangerous machine)</li> <li>7.2 Isolate the hazard (i.e. keep the machine in a closed room and operate it remotely; barricade an unsafe area off)</li> <li>7.3 Substitute the hazard with a safer alternative (i.e., replace the machine with a safer one)</li> <li>7.4 Use administrative controls to reduce the risk (i.e. give trainings on how to use equipment safely; OSH-related topics, issue warning signages, rotation/shifting work schedule)</li> <li>7.5 Use engineering controls to reduce the risk (i.e. use safety guards to machine)</li> <li>7.6 Use personal protective equipment</li> </ul>

	<p>7.7 Safety, Health and Work Environment Evaluation</p> <p>7.8 Periodic and/or special medical examinations of workers</p>
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**EVIDENCE GUIDE**

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <p>1.1. Recognize related occupational safety and health risks and hazards based on OSH work standards</p> <p>1.2. Identify incident/emergency procedures relevant to workplace based on relevant OSH work standards</p> <p>1.3. Follow the OSH work instructions in accordance with workplace policies and procedures</p> <p>1.4. Utilize personal protective equipment, materials, tools, machinery, and equipment according to OSH work standards</p> <p>1.5. Obey OSH requirements in accordance with workplace policies and procedures</p> <p>1.6. Executed incident/ emergency procedures based on OSH Procedures</p>
2. Resource Implications	<p>The following resources should be provided:</p> <p>2.1 Facilities, materials, tools and equipment necessary for the activity</p>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1 Observation/Demonstration with oral questioning</p> <p>3.2 Third party report</p>
4. Context for Assessment	<p>4.1 Competency may be assessed in the work place or in a simulated work place setting</p>

**UNIT OF COMPETENCY** : **APPLY ENVIRONMENTAL WORK STANDARDS**

**UNIT CODE** : **400311108**

**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitude to identify environmental work hazards, follow environment work procedures and comply with environmental requirements.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. 1. Identify environmental work hazards	1.1 Related <b>environmental hazards</b> are recognized based on <b>environmental work standards</b> . 1.2 Environmental work standards are interpreted in accordance with relevant policies. 1.1 <b>Required resources</b> to minimize the effect of environmental hazards are prepared based on relevant environmental work standards.	1.1 Environmental Hazards 1.2 Environmental Work Standards 1.3 Required Resources 1.4 OSH Standards 1.5 Fight against poverty rights 1.6 Environmental Protection 1.7 Respect of Human Rights	1.1 Critical thinking 1.2 Problem solving 1.3 Observation Skills
2. Follow environmental work procedures	2.1 <b>Environmental protection</b> precautionary activities are practiced based on environmental work procedures. 2.2 Work activities are executed in accordance with <b>Environmental Work Procedures</b> . 2.3 Environmental Protection Post-Activities are accomplished based on environmental work procedures.*	2.1 Environmental Protection 2.2 Environmental Work Procedures 2.3 Renewable Energies	2.1 Critical thinking 2.2 Problem solving 2.3 Observation Skills

<p>3. Comply with environmental work requirements</p>	<p>3.1 Required resources are utilized in accordance with workplace environmental policies.</p> <p>3.2 <b>Environmental hazardous and non-hazardous</b> materials are stored in accordance with <b>environmental regulations</b>.</p> <p>3.3 Hazardous and Non-hazardous Wastes disposed according to environmental regulations.</p>	<p>3.1 Environmental Work Procedures</p> <p>3.2 Environmental Laws</p> <p>3.3 Environmental Hazardous and Non-Hazardous Materials</p>	<p>3.1 Critical thinking</p> <p>3.2 Problem solving</p> <p>3.3 Observation Skills</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Hazards	May include but not limited: 1.1 Tobacco Smoke 1.2 Asbestos 1.3 Lead 1.4 Combustion Gases 1.5 Chemicals 1.6 Pesticides 1.7 Pollutants 1.8 Contaminated Drinking Water 1.9 Noise 1.10 Dust
2. Environmental Work Standards	May include but not limited: 2.1 Air Quality Standards 2.2 Emission Standards 2.3 ISO 14001: Environmental Management System 2.4 Environmental Statements 2.5 Environmental Quality Standards 2.6 Work Environment Measurement Standard
3. Required Resources	May include but not limited: 3.1 Electric 3.2 Water 3.3 Fuel 3.4 Telecommunications 3.5 Supplies and Materials 3.6 Trash Cans 3.7 Relevant Data Sheets 3.8 Barriers or Barricades
4. Environmental Protection	May include (but not limited to) protection against 4.1 Overconsumption of Resources 4.2 Destruction of Ecosystems 4.3 Habitat Destructions 4.4 Extinction of Wildlife 4.5 Pollutions 4.6 Water Degradation

5. Environmental Work Procedures	<p>May include but not limited:</p> <ul style="list-style-type: none"> <li>5.1 Environmental pollution control measures</li> <li>5.2 Oil and Fuel use</li> <li>5.3 Disposal and Reuse</li> <li>5.4 Herbicide applications</li> <li>5.5 Breed Bird Mitigation</li> <li>5.6 Tree Removal Works</li> <li>5.7 Erosion Protection</li> <li>5.8 Scrub Clearance</li> <li>5.9 Bankside sediment clearance</li> </ul>
6. Environmental Hazardous and Non-Hazardous Materials	<p>May include but not limited:</p> <ul style="list-style-type: none"> <li>6.1 Acids</li> <li>6.2 Adhesives</li> <li>6.3 Aerosols</li> <li>6.4 Asbestos</li> <li>6.5 Batteries</li> <li>6.6 Chemicals</li> <li>6.7 Compact fluorescent lamps</li> <li>6.8 Drugs</li> <li>6.9 Dyes</li> <li>6.10 E-Waste</li> <li>6.11 Gasoline</li> <li>6.12 Grease</li> <li>6.13 Lead</li> <li>6.14 Motor Oil</li> <li>6.15 Solvents</li> <li>6.16 Weed Killers</li> </ul>
7. Environmental Regulations	<p>May include:</p> <ul style="list-style-type: none"> <li>7.1 Clean Air Act</li> <li>7.2 Clean Water Act</li> <li>7.3 Endangered Species Act</li> <li>7.4 Resource Conservation and Recovery Act</li> <li>7.5 Cave Resources and Management Act</li> <li>7.6 Fisheries Code</li> <li>7.7 Forestry Code</li> <li>7.8 Mining Act</li> </ul>

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1. Interpreted the Environmental Work Standards in accordance to relevant policies</li> <li>1.2. Prepared required resources to minimize effects of environmental hazards based on relevant environmental work standards</li> <li>1.3. Practiced environmental protection pre-cautionary activities based on environmental work procedures</li> <li>1.4. Executed work activities in accordance with environmental work procedures</li> <li>1.5. Accomplished environmental protection post-activities based on environmental work procedures</li> <li>1.6. Stored environmental hazardous and non-hazardous materials in accordance with environmental regulations</li> <li>1.7. Disposed hazardous and non-hazardous wastes according to environmental regulations</li> </ol>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ol style="list-style-type: none"> <li>2.1. Workplace with storage facilities</li> <li>2.2. Tools, materials and equipment relevant to the tasks (ex. Cleaning tools, cleaning materials, trash bags, etc.)</li> <li>2.3. PPE</li> <li>2.4. Manuals and references</li> </ol>
<p>3. Methods of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <ol style="list-style-type: none"> <li>3.1. Demonstration</li> <li>3.2. Oral questioning</li> <li>3.3. Written examination</li> </ol>
<p>4. Context for Assessment</p>	<ol style="list-style-type: none"> <li>4.1. Competency assessment may occur in workplace or any appropriately simulated environment</li> <li>4.2. Assessment shall be observed while tasks are being undertaken whether individually or in-group</li> </ol>

**UNIT OF COMPETENCY : ADOPT ENTREPRENEURIAL MINDSET IN THE WORKPLACE**

**UNIT CODE : 400311109**

**UNIT DESCRIPTOR** : This unit covers the outcomes required to support and internalize an entrepreneurial mindset and observe basic entrepreneurial practices in the workplace.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Determine entrepreneurial mindset	1.1 <b>Entrepreneurial mindset</b> in the workplace is determined from enterprise practices and policies. 1.2 <b>Entrepreneurial mindset</b> in the workplace is studied and affirmed based on current enterprise practices. 1.1 Clarification from reliable <b>sources</b> is sought regarding entrepreneurial mindset and corporate culture.	1.1 Workplace policies and practices relating to entrepreneurship 1.2 Elements of corporate culture 1.3 Entrepreneurial mindset 1.4 Entrepreneurial practices in the workplace 1.5 Desirable attitudes: Patience 1.5.1 Willingness to learn 1.5.2 Attention to details	1.1 Identifying entrepreneurial mindset 1.2 Studying and affirming entrepreneurial mindset 1.3 Selecting and emulating desirable entrepreneurial practices 1.4 Communication skills

<p>2. Identify entrepreneurial practices</p>	<p>2.1 Entrepreneurial practices are determined based on enterprise requirements.</p> <p>2.2 Entrepreneurial practices are performed following workplace and client requirements.</p> <p>2.1 Cost-effective measures are complied with reference to workplace best practices.</p>	<p>2.1 Quality assurance practices</p> <p>2.2 Workplace and client requirements</p> <p>2.3 Types of cost-effective measures</p> <p>2.4 Workplace quality policy</p> <p>2.5 Attitude:</p> <ul style="list-style-type: none"> <li>● Patience</li> <li>● Attention to details</li> </ul>	<p>2.1 Performing quality assurance practices</p> <p>2.2 Complying quality assurance requirements</p> <p>2.3 Complying to cost-effective measures</p> <p>2.1 Communication skills</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Entrepreneurial mindset	May include (but not limited to) workplace thinking relating to: <ul style="list-style-type: none"> <li>1.1 Economy in the use of resources</li> <li>1.2 Waste management</li> <li>1.3 Quality-consciousness</li> <li>1.4 Cost-consciousness</li> <li>1.5. Safety- and health- consciousness</li> </ul>
2. Quality assurance practices	May include but not limited to: <ul style="list-style-type: none"> <li>2.1 Use of quality procedures manual</li> <li>2.2 Quality policy</li> <li>2.3 Best/Good practices</li> <li>2.4 Continuous improvement program</li> </ul>
3. Reliable sources	May include but not limited to: <ul style="list-style-type: none"> <li>3.1 Supervisors</li> <li>3.2 Colleagues</li> <li>3.3. Clients/Partners</li> </ul>

## EVIDENCE GUIDE

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Demonstrated affirmation of entrepreneurial mindset</li> <li>1.2 Observed entrepreneurial practices</li> <li>1.3 Complied with cost effective measures</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Simulated or actual workplace</li> <li>2.2 Tools, materials and supplies needed to demonstrate the required tasks</li> <li>2.3 References and manuals</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Written examination</li> <li>3.2 Demonstration/observation with oral questioning</li> <li>3.3 Portfolio assessment with interview</li> <li>3.4 Third Party report</li> </ul>
4. Context of Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in workplace or in a simulated workplace setting</li> <li>4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group</li> </ul>

## COMMON COMPETENCIES

**UNIT OF COMPETENCY : APPLY SAFETY PRACTICES**

**UNIT CODE : MEE722201**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required in building and maintaining effective relationships with clients/customers.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify hazards	1.1 Hazards are identified correctly in accordance with OHS principles. 1.2 Safety signs and symbols are identified and adhered to.	1.1 Shop safety signs, symbols and alarms	1.1 Basic communication skills 1.2 Interpersonal skills 1.3 Reading skills required to understand safety signs and symbols 1.4 Reporting / recording accidents and potential hazards

<p>2. Use protective clothing and devices</p>	<p>2.1 Appropriate protective <b>clothing and devices</b> correctly selected and used in accordance with OHS requirements or industry/ company policy.</p>	<p>2.1 Safety precautionary measures 2.2 General OSH principles and legislation</p>	<p>2.1 Basic communication skills 2.2 Interpersonal skills 2.3 Reading skills required to understand use of protective clothing and devices</p>
<p>3. Perform safe handling of tools, equipment and materials</p>	<p>3.1 Safety procedures for pre-use check and operation of tools and equipment followed in accordance with industry/ company policies. 3.2 Tools, equipment and materials handled safely in accordance with OHS requirements and industry/ company policies.</p>	<p>3.1 Operating of machine tools 3.2 Handling tools and materials 3.3 Environmental requirements relative to work safety</p>	<p>3.1 Basic communication skills 3.2 Interpersonal skills 3.3 Reading skills required to interpret instructions 3.4 Communicating with superiors and coworkers</p>

<p>4. Perform first aid</p>	<p>4.1 First aid treatment of <b>injuries</b> is carried out according to recommended procedures</p>	<p>4.1 Types of injuries</p>	<p>4.1 Basic communication skills  4.2 Interpersonal skills  4.3 Reading skills required to interpret instructions  4.4 Basic First Aid application skills</p>
<p>5. Use fire extinguisher</p>	<p>5.1 Fire extinguisher selected and operated correctly according to the <b>type of fire</b>.</p>	<p>5.1 Identification of types of fire</p>	<p>5.1 Basic communication skills  5.2 Interpersonal skills  5.3 Reading skills required to interpret instructions  5.4 Proper handling of Fire Extinguisher</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Hazards	Cluttered tools and materials 1.1 Slippery floors (caused by oil, grease or any liquid) 1.2 Exposed electrical wires 1.3 Sharp edges 1.4 Machine without guards or with exposed moving parts 1.5 Uncollected chips or other wastes, etc.
2. Protective clothing and devices	Protective clothing and devices may include but is not limited to: 2.1 Safety glasses/goggles 2.2 Safety shoes 2.3 Overalls 2.4 Cap
3. Injuries	Injuries may include: 3.1 Burns/scalds 3.2 Fractures 3.3 Cuts and abrasions 3.4 Poisoning 3.5 Foreign bodies in the eye 3.6 Concussion 3.7 Shock
4. Type of fires	Fires involving or caused by: 4.1 Common combustibles (wood, cloth, paper, rubber and plastic) 4.2 Flammable liquids (gasoline, oil, solvents, paints, etc.) 4.3 Energized electrical equipment (wiring, fuse boxes, circuit breakers, appliances, etc.) 4.4 Combustible metals (magnesium, sodium, etc.)

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identified hazardous area 1.2 Used protective clothing and devices 1.3 Handled tools, equipment and materials properly 1.4 Performed first aid 1.5 Used fire extinguisher
2. Resource Implications	The following resources MUST be provided 2.1 Tools, equipment and facilities appropriate to processes or activity 2.2 Materials relevant to the proposed activity
3. Methods of Assessment	Competency may be assessed through: 3.1 Demonstration 3.2 Written or oral short answer questions 3.3 Practical exercises
4. Context of Assessment	Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

**UNIT OF COMPETENCY : INTERPRET WORKING DRAWINGS And SKETCHES**

**UNIT CODE : MEE722202**

**UNIT DESCRIPTOR : This unit covers the competencies required to read, prepare and interpret drawings and sketches.**

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Interpret technical drawing	1.1 Components, assemblies or objects recognized as required. 1.2 Dimensions identified as appropriate. 1.3 Instructions identified and followed as required. 1.4 Material requirements identified as required. 1.5 Symbols recognized as appropriate in the drawing. 1.6 Tolerance, limits and fits identified in the drawing.	1.1 Alphabet of lines 1.2 Projections 1.3 Drawing symbols 1.4 Dimensioning techniques 1.5 Tolerance, limits and fits 1.6 Engineering materials 1.7 Drawing tools and supplies	1.1 Basic communication skills 1.2 Reading skills required to interpret technical drawing 1.3 Reading skills required to interpret instructions 1.4 Ability to identify kinds of material
2. Prepare freehand sketch of parts	2.1 Sketch drawn correctly and appropriately. 2.2 Sketches depicted objects or parts appropriately. 2.3 The dimensions indicated in sketch are clear and correct.	2.1 Alphabet of lines 2.2 Projections 2.3 Drawing symbols 2.4 Dimensioning techniques 2.5 Drawing tools and supplies	2.1 Basic communication skills 2.2 Reading skills required to interpret technical drawing 2.3 Reading skills required to interpret

	<p>2.4 Instructions included in the sketch are clear and correct.</p> <p>2.5 Base line or datum points indicated as required</p>		<p>instructions</p> <p>2.4 Basic skills in freehand drawing</p>
3. Interpret details from freehand sketch	<p>3.1 Components, assemblies or objects recognized as required.</p> <p>3.2 Dimensions identified as appropriate.</p> <p>3.3 Instructions identified and followed as required.</p> <p>3.4 Material requirements identified as required.</p> <p>3.5 Symbols recognized as appropriate in the drawing.</p>	<p>3.1 Alphabet of lines</p> <p>3.2 Projections</p> <p>3.3 Drawing symbols</p> <p>3.4 Dimensioning techniques</p> <p>3.5 Tolerance, limits and fits</p> <p>3.6 Engineering materials</p> <p>3.7 Drawing tools and supplies</p>	<p>3.1 Basic communication skills</p> <p>3.2 Reading skills required to interpret technical drawing</p> <p>3.3 Reading skills required to interpret instructions</p> <p>3.4 Ability to identify kinds of material</p>

**RANGE OF VARIABLES**

<b>VARIABLE</b>	<b>RANGE</b>
1. Drawing	<p>1.1 Drawing technique include:</p> <p>1.1.1 Perspective</p> <p>1.1.2 Exploded view</p> <p>1.1.3 Hidden view technique</p> <p>1.2 Projections:</p> <p>1.2.1 First angle projections</p> <p>1.2.2 Third angle projections</p>
2. Tolerance	<p>May include:</p> <p>2.1 General tolerance</p> <p>2.2 Angular tolerance</p> <p>2.3 Geometric tolerance</p>

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Interpreted technical drawing 1.2 Prepared sketches 1.3 Interpreted sketches
2. Resource Implications	The following resources MUST be provided 2.1 Drafting room/facilities and drafting instruments and supplies appropriate to the activity 2.2 Measuring tools 2.3 Drawings, sketches or blueprint 2.4 Specimen parts/components
3. Methods of Assessment	Competency may be assessed through: 3.1 Direct observation 3.2 Written or oral short answer questions 3.3 Demonstration 3.4 Project/work sample 3.5 Portfolio
4. Context of Assessment	Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

**UNIT OF COMPETENCY : SELECT AND CUT WORKSHOP MATERIALS**

**UNIT CODE** : **MEE722203**

**UNIT DESCRIPTOR** : This unit covers the skills and knowledge required to interpret, select and cut workshop materials.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Determine job requirement	1.1 <b>Plans/ drawings</b> are interpreted to produce components to specification. 1.2 Sequence of operation is determined to produce components to specification.	1.1 Alphabet of lines 1.2 Projections 1.3 Drawing symbols 1.4 Dimensioning techniques 1.5 Tolerance, limits and fits 1.6 Engineering materials 1.7 Drawing tools and supplies	1.1 Basic communication skills 1.2 Reading skills required to interpret technical drawing 1.3 Reading skills required to interpret instructions 1.4 Ability to identify kinds of material 1.5 Ability to visualize and determine sequence of operation
2. Select and measure materials	2.1 <b>Materials</b> are selected according to the requirement of the operation. 2.2 Materials are measured to the required level of accuracy using measuring tools. 2.3 <b>Measuring tools</b> are used according to the manufacturer's	2.1 Shop safety practices 2.1.1 Safe working habits 2.1.2 Safe handling of tools and materials 2.2 Blueprint reading 2.2.1 Standard drawing scales, symbols and abbreviations 2.2.2 Assembly	2.1 Basic communication skills 2.2 Reading skills required to interpret technical drawing 2.3 Ability to identify kinds of material 2.4 Ability to select material 2.5 Ability to use

	specification.	and details of drawing 2.2.3 Dimensions 2.3 Measurement 2.3.1 Linear measuring tools 2.4 Materials and related science 2.4.1 Classification and mechanical properties of engineering materials	measuring tools
3. Cut materials	3.1 Materials are cut according to plans/drawing instructions. 3.2 <b>Cutting tools/equipment</b> are used based on manufacturers specification, appropriate techniques or the <b>safety procedure.</b>	3.1 Hacksaw blade teeth configuration 3.2 Shop safety practices 3.3 Safe working habits 3.4 Safe handling of tools, equipment and materials	3.1 Reading skills required to interpret instructions in using equipment and cutting tools 3.2 Reading skills required to interpret technical drawing 3.3 Ability to use Hand hacksaw 3.4 Ability to operate Power hacksaw

**RANGE OF VARIABLES**

VARIABLE	RANGE
1. Plan/drawings	May include: 1.1 Dimensions 1.2 Tolerance

2. Materials	May include: 2.1. Ferrous 2.2. Non-ferrous
3. Measuring tools	May include: 3.1 Steel rule 3.2 Steel tape measure
4. Cutting tools/equipment	May include: 4.1 Hand hacksaw 4.2 Power hacksaw
5. Safety procedure	Safety involves the handling of: 5.1 Equipment 5.2 Tools 5.3 Materials

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Interpreted plans/drawings 1.2 Selected natural according to the requirement 1.3 Performed cutting operation 1.4 Cutting tools/equipment used safely
2. Resource Implications	The following resources MUST be provided 2.1 Tools, equipment and facilities appropriate processes of an activity 2.2 Materials relevant to the proposal activity 2.3 Drawings/plans
3. Methods of Assessment	Competency may be assessed through: 5.1 Direct observation 5.2 Oral short answer question 5.3 Practical exercises
4. Context of Assessment	Competency may be assessed in the workplace or in simulated work environment

**UNIT OF COMPETENCY : PERFORM SHOP COMPUTATIONS (BASIC)**

**UNIT CODE : MEE722204**

**UNIT DESCRIPTOR : This unit covers the competencies required to perform basic calculations using the four fundamental operations.**

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Perform four fundamental operations	1.1 Simple calculations are performed using <b><i>four fundamental operations.</i></b>	1.1 Basic knowledge in arithmetic using four fundamental operations	1.1 Fundamental skills in arithmetic
2. Perform basic calculations involving fractions and decimals	2.3 Simple calculations are performed involving fractions and decimals using the four fundamental operations. 2.4 Decimals are converted into fractions (and vice versa) accurately.	2.1 Knowledge in calculating fractions, mixed numbers and decimals 2.2 Reversible calculation of decimal and fraction	2.1 Ability to convert from English to Metric system of measurement 2.2 Ability to calculate decimals and fractions in measurements

<p>3. Perform basic calculations involving percentages</p>	<p>3.1 Simple calculations are performed to obtain percentages from information expressed in either fractional or decimal format.</p>	<p>3.1 Conversion of fraction and decimal to percent</p>	<p>3.1 Ability to calculate decimals and fractions into percent.</p>
<p>4. Perform basic calculation involving ratio and proportion</p>	<p>4.1 Simple calculations are performed involving ratio and proportion using whole numbers, fractions and decimals.</p>	<p>4.1 Calculating ratio and proportion from whole numbers, fractions, and decimals</p>	<p>4.1 Ability to apply ratio and proportion using whole numbers, fractions and decimals</p>
<p>5. Perform calculations on algebraic expressions</p>	<p>5.1 Simple calculations are performed on <b>algebraic expressions</b> using the four fundamental operations.</p> <p>5.2 Simple transposition of formulae is carried out to isolate the variable required, involving the four fundamental operations.</p>	<p>5.1 Deriving the variable required using algebraic expression</p>	<p>5.1 Ability to calculate tap drill size, feed and speed</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Four fundamental operations	May include: 1.1 Addition 1.2 Subtraction 1.3 Multiplication 1.4 Division
2. Algebraic expressions	Calculation using formula for determining 2.1 Tap drill size 2.2 Feed 2.3 Speed

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate performed calculations: 1.1 Using four fundamental operations 1.2 Involving fractions and mixed numbers 1.3 Involving fractions and decimals 1.4 Involving percentages 1.5 Involving ratio and proportion 1.6 On algebraic expressions 1.7 Of simple formulae
2. Resource Implications	The following resources <b>MUST</b> be provided: 2.1 Tools, equipment and facilities appropriate to processes or activity 2.2 Materials relevant to the proposed activity
3. Methods of Assessment	Competency may be assessed through: 3.1 Written or oral short answer questions 3.2 Practical exercises
4. Context of Assessment	Competency may be assessed in the workplace or in simulated workplace environment.

**UNIT OF COMPETENCY : MEASURE WORKPIECE (BASIC)**

**UNIT CODE : MEE722205**

**UNIT DESCRIPTOR :** This unit covers the competencies required to select and use measuring tools according to the level of accuracy required for specific firearms.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Select and use measuring tools	1.1 <b>Measuring tools</b> are selected and used according to the level of accuracy required  1.2 <b>Measurements</b> taken are accurate to the finest graduation of the selected measuring instrument.  1.3 Measuring technique used is correct and appropriate to the device used.	1.1 Shop safety practices  1.2 Safe working habits  1.3 Safe handling of measuring tools  1.4 Measurement  1.5 Linear measuring tools  1.6 Angle measuring tools  1.7 Bore measuring tools	1.1 Ability to use measuring tools safely  1.2 Ability to handle measuring tools safely  1.3 Reading skills to interpret manufacturer's instructions

<p>2. Clean and store measuring tools</p>	<p>2.1 Care and storage of devices undertaken to manufacturer's specifications or standard operating procedures.</p> <p>2.2 Decimals are converted into fractions (and vice versa) accurately.</p>	<p>2.1 Knowledge in calculating fractions, mixed numbers and decimals</p> <p>2.2 Reversible calculation of decimal and fraction</p>	<p>2.1 Ability to convert from English to Metric system of measurement</p> <p>2.2 Ability to calculate decimals and fractions in measurements</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Measuring tools	May include: <ul style="list-style-type: none"> <li>1.1 Steel tape</li> <li>1.2 Steel rule</li> <li>1.3 Straight edge</li> <li>1.4 Combination square</li> <li>1.5 Steel square</li> <li>1.6 Divider or trammel</li> <li>1.7 Caliper</li> <li>1.8 Protractor</li> <li>1.9 Vernier caliper</li> <li>1.10 Micrometer</li> </ul>
2. Measurements	<ul style="list-style-type: none"> <li>2.1 Length</li> <li>2.2 Diameter</li> <li>2.3 Depth</li> <li>2.4 Flatness</li> <li>2.5 Straightness</li> <li>2.6 Squareness</li> </ul>

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>1.1 Selected and used measuring instruments</li> <li>1.2 Cleaned and stored measuring instruments</li> </ul>
2. Resource Implications	The following resources <b>MUST</b> be provided: <ul style="list-style-type: none"> <li>2.1 Tools, equipment and facilities appropriate to the activity</li> <li>2.2 Specimen component or part to the proposed activity</li> </ul>
3. Methods of Assessment	Competency may be assessed through: <ul style="list-style-type: none"> <li>3.1 Direct observation</li> <li>3.2 Demonstration</li> <li>3.3 Written or oral short answer questions</li> <li>3.4 Portfolio</li> </ul>
4. Context of Assessment	Competency may be assessed in the workplace or in a simulated workplace environment.

**UNIT OF COMPETENCY : PERFORM ROUTINE HOUSEKEEPING**

**UNIT CODE : MEE722206**

**UNIT DESCRIPTOR :** This unit covers the competencies required to maintain an organized and clean work area.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Organize work area	1.1 Work area maintained in a safe, uncluttered and organized manner according to <b><i>workshop policy</i></b> . 1.2 All tasks carried out safely, effectively and efficiently with minimum inconvenience according to workshop policy. 1.3 Workshop policies and procedures for tidying work areas and placing items in designated areas applied.	1.1 Principles of 5S 1.2 Work policies and procedures 1.3 Safety signs and symbols 1.4 General OSH principles and legislation 1.5 Environmental requirements relative to work safety	1.1 Basic communication skills 1.2 Area management skills like tagging and separation of hazardous substances, flammable liquids and noxious chemicals

<p>2. Clean work area</p>	<p>2.1 Shop policies and procedures applied for cleaning <b>work areas</b>.</p> <p>2.2 Wastes promptly removed and disposed of according to shop policies and environmental requirements.</p> <p>2.3 Spills, wastes and other potential hazards reported to appropriate personnel and removed according to shop policies and environmental requirements.</p> <p>2.4 Signage promptly displayed in regard to unsafe areas.</p> <p>2.5 Consumable materials maintained and stored correctly after use.</p> <p>2.6 <b>Tools and equipment</b> (including guards) cleaned and used in accordance with manufacturer's instructions.</p>	<p>2.1 Principles of 5S</p> <p>2.2 Work policies and procedures</p> <p>2.3 Safety signs and symbols</p> <p>2.4 General OSH principles and legislation</p> <p>2.5 Environmental requirements relative to work safety</p> <p>2.6 Safe keeping of left-over consumable materials</p>	<p>2.1 Basic communication skills</p> <p>2.2 Reading skills required to interpret instructions</p> <p>2.3 Literacy and calculation skills in reading and comprehending label and instructions for the handling and use of chemicals and hazardous substances</p> <p>2.4 Reporting/recording accidents and potential hazards</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Workshop policy	Shop policy and procedure in regard to: 1.1 Housekeeping practices 1.2 Maintenance and storage of cleaning equipment 1.3 Use and storage of cleaning chemicals
2. Work area	Work area may include 2.1 Work benches 2.2 Walkways and aisles 2.3 Fixtures and other working surfaces
3. Tools and Equipment	Equipment and tools may include 3.1 Drill Press 3.2 Pedestal Grinder 3.3 Surface plate 3.4 Layout and marking tools 3.5 Cutting tools (hacksaw, chisel, files) 3.6 Inspection and measuring tools (templates, Vernier caliper, micrometer, straight edge, gauges, etc...)

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate organized and cleaned the work area according to shop policies and environmental requirements.
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2. Resource Implications	<p>The following resources MUST be provided:</p> <p>2.1 Tools, equipment and facilities appropriate to processes or activity</p> <p>2.2 Materials and documentation relevant to the proposed activity</p> <p>2.3 Shop policy and/or procedures manual on housekeeping, cleaning and occupational health and safety</p>
3. Methods of Assessment	<p>Competency may be assessed through:</p> <p>3.1 Direct observation</p> <p>3.2 Demonstration or role play</p> <p>3.3 Written or oral short answer questions</p> <p>3.4 Identify colleagues/clients who can be approached for the collection of competency evidence, where appropriate</p>
4. Context of Assessment	<p>Competency may be assessed in the workplace or in a simulated workplace environment.</p>

**UNIT OF COMPETENCY : PERFORM PREVENTIVE AND CORRECTIVE MAINTENANCE**

**UNIT CODE : MEE722211**

**UNIT DESCRIPTOR :** This unit covers the knowledge and skills required in performing preventive and corrective maintenance such as inspection and repair of hand tools, cleaning and lubrication of machine parts and changing drive pulley and belts.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Perform inspection of machine	1.1 Machine <i>inspected</i> according to worksite procedures. 1.2 Status/Report recorded on proforma or reported orally according to worksite procedure.	1.1 Procedure in proper machine inspection 1.2 Locating main electrical switches of the machines 1.3 Procedure in reporting / recording of machines and tools status	1.1 Regularly inspecting the machines 1.2 Reporting orally and recording on machine / tools checklist the status

<p>2. Perform cleaning and lubricating of machine</p>	<p>2.1 <b>Machines</b> lubricated as per manufacturer's recommendation using appropriate <b>tools and materials</b>.</p> <p>2.2 Fluids and lubricants replaced and/or topped up according to the prescribed schedule.</p>	<p>2.1 Proper cleaning and oiling of machines</p> <p>2.2 Knowledge in identifying kinds of oil, cutting oil, coolant or compound substances</p> <p>2.3 Procedures in cleaning and disposal of wastes</p>	<p>2.1 Ability to distinguish new, old and polluted coolant</p> <p>2.2 Ability to select and replace accordingly the coolant, cutting oil or compound substances</p> <p>2.3 Housekeeping skills in disposing metal scraps, chips and other wastes</p>
<p>3. Perform minor machine repair and adjustments</p>	<p>3.1 Minor machine repairs performed according to manufacturer's instructions or worksite procedures.</p> <p>3.2 Machine moving parts adjusted to manufacturer's specifications.</p>	<p>3.1 Work policies and worksite procedures in minor machine repairs</p> <p>3.2 Parts and function of machine tools</p> <p>3.3 Proper adjustments of moving parts</p> <p>3.4 Use of PPEs</p>	<p>3.1 Skills in using hand tools and wrenches to adjust or replace drive pulleys and belts and other machine parts</p>
<p>4. Maintain hand tools</p>	<p>4.1 Cutting tools ground to recommended specifications</p> <p>4.2 Hand tools lubricated and stored according to prescribed procedure</p>	<p>4.1 Geometry of cutting tools</p> <p>4.2 Use of PPEs</p> <p>4.3 Procedure in correct handling and storage of hand tools</p>	<p>4.1 Skills in using pedestal grinder and portable grinder safely</p> <p>4.2 Reading skills to interpret lubricating and storage procedures</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Inspected	Inspected machine parts include: 1.1 V-belt 1.2 Bearing 1.3 Gears 1.4 Clutch 1.5 Drive pulley
2. Machines	Machine include but not limited to: 2.1 Lathe machine 2.2 Milling machine 2.3 Grinding machine
3. Tools and Equipment	Tools and materials used include: 3.1 Lubricants 3.2 Oil can 3.3 Grease gun 3.4 Oil 3.5 Coolant or compound

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that that the candidate: 1.1 Performed inspection of machine 1.2 Performed cleaning and lubricating of machine 1.3 Performed minor machine repairs and adjustments.
2. Resource Implications	The following resources MUST be provided: 2.1 Tools, equipment and facilities appropriate to processes or activity 2.2 Materials relevant to the proposed activity
3. Methods of Assessment	Competency may be assessed through: 3.1 Direct observation of activities 3.2 Oral or written questioning
4. Context of Assessment	Competency may be assessed in the workplace or in simulated workplace environment. .

## CORE COMPETENCIES

**UNIT OF COMPETENCY** : **DEMONSTRATE FIREARMS SAFETY RULES AND FUNDAMENTALS OF MARKSMANSHIP**

**UNIT CODE** : **AB-MEE1374020722301**

**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitude required to demonstrate firearms safety rules and fundamentals of marksmanship. It includes practicing firearm safety handling, practicing safety protocols in the workplace, establishing test area and establishing safety area.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Practice firearm safety handling	<p>1.1 <b>Gun Safety protocols</b> is followed based on industry standards</p> <p>1.2 Firearm basic parts and functions are identified based on industry standards</p> <p>1.3 Gun handling techniques are applied based on the fundamentals of marksmanship</p> <p>1.4 Unwanted incidents is reported to Trainer based on OSH standards</p>	<p><b>Communication</b></p> <p>1.1 Fundamentals of armament</p> <p>1.2 Fundamentals of marksmanship</p> <p>1.3 Gun safety rules awareness</p> <p>1.4 International gun safety rules and protocols</p>	<p>1.1 Handling gun safely</p> <p>1.2 Enumerating five fundamentals of marksmanship</p> <p>1.3 Identifying hazards and risks</p>
2. Practice safety protocols in the workplace	<p>2.1 Safety protocols in the workplace is followed based on OSH standards</p> <p>2.2 <b>PPE</b> is worn appropriately based</p>	<p><b>Science</b></p> <p>2.1 Gun safety rules awareness</p> <p>2.2 Appropriate PPE</p> <p>2.3 Location of designated</p>	<p>2.1 Handling gun safely</p> <p>2.2 Enumerating five fundamentals of marksmanship</p>

	<p>on OSH standards</p> <p>2.3 Workplace safety and emergency <b>signages</b> are observed based on OSH standards</p>	<p>emergency exits</p> <p>2.4 Description of signages</p> <p>2.5 Location of emergency kits</p> <p>2.6 Machine and tools safety</p> <p>2.7 First aid and emergency procedures</p> <p>2.8 Safe firearm storage system</p> <p><b>Communication</b></p> <p>2.9 Five fundamentals of marksmanship</p> <p>2.10 Fundamentals of armaments</p>	<p>2.3 Wearing of appropriate PPE</p> <p>2.4 Identifying location</p> <p>2.5 Interpreting signages</p> <p>2.6 Applying first aid</p> <p>2.7 Handling machine and tools safely</p> <p>2.8 Storing firearms system safely</p>
<p>3. Establish test area</p>	<p>3.1 Standard <b>backstop area</b> is established based in the designated area</p> <p>3.2 Standard backstop area is constructed based on <b>standards</b></p> <p>3.3 <b>Exhaust system</b> of test range facility is maintained according to OSH standards</p> <p>3.4 Unwanted incidents is reported to Trainer based on OSH standards</p>	<p><b>Science</b></p> <p>3.1 Hazards and risk</p> <p>3.2 OSH standards</p> <p><b>Communication</b></p> <p>3.3 Understand ballistic behavior</p> <p>3.4 Cycle of operation</p> <p>3.5 PNP FEO regulations</p> <p><b>Technology</b></p> <p>3.6 Ammo classifications</p>	<p>3.1 Following test firing procedures</p> <p>3.2 Identifying hazards and risks</p> <p>3.3 Managing jam issue</p> <p>3.4 Identifying backstop and bullet trap design requirements</p> <p>3.5 Analyzing bullet trajectory</p> <p>3.6 Ensuring firearm and ammo compatibility</p>

<p>4. Establish safety area</p>	<p>4.1 <b>Designated area</b> is installed with appropriate signages based on basic gun safety rules</p> <p>4.2 <b>Safety equipment</b> was validated to be accessible based on industry standards</p> <p>4.3 Backstop is maintained regularly based on workplace policy</p> <p>4.4 Unwanted incidents is reported to Trainer based on OSH standards</p>	<p><b>Science</b></p> <p>4.1 OSH standards</p> <p>4.2 Workplace hazards and risks</p> <p><b>Communication</b></p> <p>4.3 International gun safety rules and protocols</p> <p>4.4 Emergency response and first aid protocols</p> <p>4.5 Lessons learned/previous incidents</p> <p>Maintenance procedures</p>	<p>4.1 Handling gun safely</p> <p>4.2 Practicing safe working habits</p> <p>4.3 Wearing PPEs</p> <p>4.4 Practicing 5S</p> <p>4.5 Practicing emergency drills</p> <p>4.6 Scheduling preventive maintenance</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Gun Safety protocols	May include but not limited to: 1.1 5S 1.2 Four golden rules on gun safety 1.3 Dos and Don'ts 1.4 Emergency drills
2. PPE	May include but not limited to: 2.1 Eye protection 2.2 Ear protection 2.3 Nose protection or respirator 2.4 Safety shoes 2.5 Ballistic apron 2.6 Gloves 2.7 Face protection
3. Signages	May include but not limited to: 3.1 Manmade Hazards 3.2 Natural Hazards 3.3 Hazardous waste disposals 3.4 Exits 3.5 Safety areas
4. Backstop area	May include but not limited to: 4.1 Steel plate 4.2 Concrete 4.3 Stand filled 4.4 Logs 4.5 Used tiles 4.6 Angle and design 4.7 Baffles
5. Standards	May include but not limited to: 5.1 FEO requirements 5.2 BFP requirements 5.3 OSH
6. Exhaust system	May include but not limited to: 6.1 Air filtration 6.2 HEPA 6.3 Negative pressure system 6.4 Positive pressure system 6.5 Proper ventilation

7. Designated area	May include but not limited to: 7.1 Waste disposal 7.2 Gun handling area 7.3 Storage 7.4 Staging area 7.5 Access control
8. Safety equipment	May include but not limited to: 8.1 Fire extinguisher 8.2 First aid kit 8.3 Eye wash station 8.4 Physical barriers 8.5 Exhaust systems

### EVIDENCE GUIDE

1. Critical aspect of competencies	Assessment required evidence that the candidate:  1.1 Followed gun safety protocols based on the industry standards 1.2 Understood mechanics of firearms basic and functions based on the industry standards 1.3 Understood the basic techniques for proper gun handling based on the fundamentals of marksmanship 1.4 Reported unwanted incidents reported to trainer based on the OSH standards 1.5 Followed safety protocols in the workplace based on the OSH standards 1.6 Worn PPE appropriately based on OSH standards 1.7 Observed workplace safety and emergency signages based on OSH standards 1.8 Established backstop area is established based on the designated area 1.9 Maintained exhaust system of test range according to OSH Standards
2. Resource Implications	The following resources should be provided: 2.1 Tools, equipment, and materials relevant to the activity to be performed 2.2 Actual or simulated safety area with complete facilities

3. Methods of Assessment	Competency may be assessed through: 3.1 Demonstration with oral questioning 3.2 Direct observation 3.3 Written test
4. Context for Assessment	4.1 Competency may be assessed in actual safety area or simulated safety area 4.2 Assessment done during students return demonstration

**UNIT OF COMPETENCY : PERFORM PREPARATORY ACTIVITIES FOR GUNSMITHING**

**UNIT CODE : AB-MEE1374020722302**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitude required to perform preparatory activities for gunsmithing. It includes determining job order/directives, set up a clean and safe work area, and prepare tools and equipment.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Determine Job Order/Directives	1.1 <b>Firearm model</b> and serial number are identified based on the job order 1.2 <b>Specific instruction</b> is identified based on the job order 1.3 Specific <b>job requirements</b> are checked based on job order 1.4 <b>Specific tools</b> are prepared based on job requirement	<b>Science</b> 1.1 Types of firearms 1.2 Types of tools 1.3 Parts compatibility 1.4 Proper storage room <b>Communication</b> 1.5 Data Privacy Act 1.6 Clearance procedure 1.7 Gun safety awareness	1.1 Communicating skills 1.2 Familiarizing the types of firearms 1.3 Identifying types of tools 1.4 Handling gun safety 1.5 Determining appropriate parts 1.6 Complying with procedures 1.7 Storing firearm properly 1.8 Complying Data Privacy Act

<p>2. Set up a clean and safe work area</p>	<p>2.1 Work area is verified in accordance with industry standards</p> <p>2.2 Work area is checked for proper ventilation in accordance with industry standards</p> <p>2.3 Work area is prepared based on industry standards</p> <p>2.4 Work area is cleared from hazards and risks according with industry standards</p>	<p><b>Communication</b></p> <p>2.1 5S Awareness</p> <p>2.2 OSH Standards</p> <p>2.3 Familiarization of Checklist</p>	<p>2.1 Practicing 5S</p> <p>2.2 Complying with OSH Standards</p> <p>2.3 Familiarizing checklist</p>
<p>3. Prepare tools and equipment</p>	<p>3.1 Tools and equipment are checked or replaced based on industry standards</p> <p>3.2 <b>Tools and equipment</b> are prepared based on job requirement</p> <p>3.3 Tools and equipment are used according to its function</p> <p>3.4 Tools and equipment are maintained based on industry standards</p>	<p>3.1 Familiarization on the use of tools and equipment</p> <p>3.2 Familiarization of tools and equipment</p> <p>3.3 Determine whether tools and equipment are functional</p>	<p>3.1 Familiarizing tools and equipment</p> <p>3.2 Familiarizing use of tools and equipment</p> <p>3.3 Determining tools and equipment functionality</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Firearm model	This may include but not limited to: 1.1 Single-action/double action recoil-operated, pistol (1911) 1.2 Striker-fired pistol 1.3 Revolver 1.4 Shot gun (Pump-action and semi-automatic) 1.5 Rifle (Bolt action and semi-automatic) 1.6 Assault Rifle (semi-automatic and automatic)
2. Specific Instruction	This may include but not limited to: 2.1 Inspection/diagnose 2.2 Cleaning 2.3 Repair 2.4 Customization 2.5 Tuning
3. Job requirements	This may include but not limited to: 3.1 Time frame 3.2 Scope of work 3.3 Tools, parts
4. Specific tools	This may include but not limited to: 4.1 Cleaning mat 4.2 Cleaning kits 4.3 Proper lubricants 4.4 Needle file 4.5 Screws, wrenches 4.6 Punch set 4.7 Hammer/Rubber mallet 4.8 Pliers
5. Tools and equipment	This may include but not limited to: 5.1 Handtools <ul style="list-style-type: none"> <li>5.1.1 Needle file</li> <li>5.1.2 Screws, wrenches</li> <li>5.1.3 Punch set</li> <li>5.1.4 Hammer/rubber mallet</li> <li>5.1.5 Pliers</li> </ul> 5.2 Sandblasting machine 5.3 Bench vice 5.4 Grinder

## EVIDENCE GUIDE

<p>1. Critical aspect of competencies</p>	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Identified Firearm model and serial number based on the job order</li> <li>1.2 Identified specific instruction based on the job order</li> <li>1.3 Checked job requirements based on the job order</li> <li>1.4 Prepared specific tools based on the job requirement</li> <li>1.5 Verified work area based on industry standards</li> <li>1.6 Checked work area for proper ventilation based on the industry standards</li> <li>1.7 Prepared work area based on industry standards</li> <li>1.8 Cleared work area from hazards and risks based on the industry standards</li> <li>1.9 Prepared tools and equipment are prepared based on job requirement</li> <li>1.10 Used tools and equipment based on its function</li> <li>1.11 Maintained tools and equipment based on industry standards</li> </ul>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.3 Tools, equipment, and materials relevant to the activity to be performed</li> <li>2.4 Actual or simulated safety area with complete facilities</li> </ul>
<p>3. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>3.4 Demonstration with oral questioning</li> <li>3.5 Direct observation</li> <li>3.6 Written test</li> </ul>
<p>4. Context for Assessment</p>	<ul style="list-style-type: none"> <li>4.3 Competency may be assessed in actual safety area or simulated safety area</li> <li>4.4 Assessment done during students return demonstration</li> </ul>

**UNIT OF COMPETENCY : ASSEMBLE AND DISASSEMBLE FIREARMS**

**UNIT CODE : AB-MEE1374020722303**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitude required to assemble and disassemble firearms. It includes identifying firearms platform, identifying parts and functions of firearm, performing firearm disassembly, performing firearm assembly and conducting basic functional check

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify firearms platform	1.1 <b>Firearm platform</b> is identified based on its category 1.2 Types and <b>variants</b> of firearm are distinguished based on its classification 1.3 Appropriate procedure in firearm is applied to the specific platform based on job description	<b>Science</b> 1.1 Types of firearms platforms 1.2 Variants of firearms platforms 1.3 Mechanism of specific platform	1.1 Enumerating different firearm platform 1.2 Familiarizing specific firearm platform 1.3 Explaining particular firearm platform
2. Identify parts and functions of firearm	2.1 <b>Parts of firearm</b> are identified based on its form and placement 2.2 <b>Basic functions of firearm</b> parts are classified based on its cycle of operation 2.3 Basic Functions of firearm parts are interconnected and interrelated based on its cycle of operation	<b>Science</b> 2.1 Basic parts of firearm 2.2 Major and minor components of firearm 2.3 Cycle of operation	2.1 Identifying basic parts of firearms 2.2 Identifying major and minor components 2.3 Familiarizing cycle of operation

<p>3. Perform firearm disassembly</p>	<p>3.1 <b>PPE</b> is worn based on OSH standard</p> <p>3.2 Steps in disassembly of firearms are followed based on the procedure</p> <p>3.3 Tools for disassembly are used based on its function</p> <p>3.4 Disassembled parts are stored based on procedure</p> <p>3.5 <b>Gun safety protocol</b> is demonstrated based on industry standards</p>	<p><b>Science</b></p> <p>3.1 Steps in disassembly</p> <p>3.2 Types of tools</p> <p>3.3 Gun safety awareness</p> <p>3.4 Appropriate PPEs</p>	<p>2.1 Following steps in disassembly</p> <p>2.2 Handling gun safely</p> <p>2.3 Using proper tools</p> <p>2.4 Wearing of PPEs</p>
<p>4. Perform firearm assembly</p>	<p>4.1 Steps in assembly are followed based on procedure</p> <p>4.2 Proper tools are used based on its function</p> <p>4.3 Parts are verified complete based on its function and placement</p>	<p><b>Science</b></p> <p>4.1 Steps in assembly</p> <p>4.2 Types of tools</p> <p>4.3 Gun safety awareness</p> <p>4.4 Appropriate PPEs</p>	<p>4.1 Following steps in assembly</p> <p>4.2 Using proper tools</p> <p>4.3 Handling gun safely</p> <p>4.4 Wearing PPEs</p>
<p>5. Conduct basic functional check</p>	<p>5.1 PPE is worn based on OSH standard</p> <p>5.2 Functionality is checked based on cycle of operation</p> <p>5.3 <b>Cycle of operation</b> is established based on firearm mechanical process</p> <p>5.4 Gun safety protocol is demonstrated based on industry standards</p>	<p><b>Science</b></p> <p>5.1 Familiarization of cycle of operation</p> <p>5.2 Basic functions of firearm</p> <p>5.3 Gun safety awareness</p> <p>5.4 Appropriate PPE</p>	<p>5.1 Performing basic functions</p> <p>5.2 Wearing appropriate PPE</p> <p>5.3 Handling gun safely</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. PPE	This may include but not limited to: 1.1 Earplug 1.2 Safety glasses 1.3 Gloves 1.4 Safety Shoes 1.5 Apron
2. Firearm Platform	This may include but not limited to: 2.1 Pistol 2.2 Revolver 2.3 Rifle 2.4 Shotgun
3. Variants	This may include but not limited to: 3.1 Pistol 3.1.1 Hammer fired 3.1.2 Striker fired 3.1.3 Internal hammer 3.2 Shotgun 3.2.1 Semi-auto 3.2.2 Pump 3.3 Revolver 3.4 Rifle 3.4.1 Semi-auto 3.4.2 Full auto 3.4.3 Bolt action
4. Parts of Firearm	This may include but not limited to: 4.1 Major 4.1.1 Upper receiver 4.1.2 Lower receiver 4.1.3 Barrel 4.1.4 Bolt 4.1.5 Frame 4.1.6 Slide 4.1.7 Trigger 4.2 Minor 4.2.1 Pins 4.2.2 Spring 4.2.3 Screws 4.2.4 Accessories

5. Basic Functions of Firearm	<p>This may include but not limited to:</p> <ul style="list-style-type: none"> <li>5.1 Feeding</li> <li>5.2 Chambering</li> <li>5.3 Locking</li> <li>5.4 Unlocking</li> <li>5.5 Extracting</li> <li>5.6 Ejecting</li> <li>5.7 Firing</li> <li>5.8 Cocking</li> </ul>
6. Gun safety protocol	<p>This may include but not limited to:</p> <ul style="list-style-type: none"> <li>6.1 4 Golden rules <ul style="list-style-type: none"> <li>6.1.1 Always treat the gun as loaded</li> <li>6.1.2 Be sure of your target and behind it.</li> <li>6.1.3 Always keep your finger off the trigger</li> <li>6.1.4 Never point the gun at anything you don't intend to destroy or shoot.</li> </ul> </li> </ul>
7. Cycle of Operation	<p>This may include but not limited to:</p> <ul style="list-style-type: none"> <li>7.1 Feeding</li> <li>7.2 Chambering</li> <li>7.3 Locking</li> <li>7.4 Unlocking</li> <li>7.5 Extracting</li> <li>7.6 Ejecting</li> <li>7.7 Firing</li> <li>7.8 Cocking</li> </ul>

## EVIDENCE GUIDE

<p>1. Critical aspect of competencies</p>	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Identified firearm platform based on its category</li> <li>1.2 Distinguished types and variants of firearm based on its classification</li> <li>1.3 Applied appropriate procedure in firearm is applied to the specific platform based on job description</li> <li>1.4 Identified parts of firearm based on its form and placement</li> <li>1.5 Classified basic functions of firearm parts based on cycle of operation</li> <li>1.6 Interconnected and interrelated Basic Functions of firearm parts are based on its cycle of operation</li> <li>1.7 Worn PPE based on OSH standards</li> <li>1.8 Followed disassembly of firearms based on the procedure</li> <li>1.9 Used tools for disassembly based on its function</li> <li>1.10 Stored disassemble parts based on its function</li> <li>1.11 Demonstrated gun safety protocols based on industry standards</li> <li>1.12 Followed steps in assembly based on procedure</li> <li>1.13 Used proper tools based on its function</li> <li>1.14 Verified Parts completely based on its function and placement</li> <li>1.15 Checked functionality based on cycle of operation</li> <li>1.16 Established cycle of operation based on firearm mechanical process</li> </ul>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Tools, equipment, and materials relevant to the activity to be performed</li> <li>2.2 Actual or simulated safety area with complete facilities</li> </ul>
<p>3. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Demonstration with oral questioning</li> <li>3.2 Direct observation</li> <li>3.3 Written test</li> </ul>
<p>4. Context for Assessment</p>	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in actual safety area or simulated safety area</li> <li>4.2 Assessment done during students return demonstration</li> </ul>

**UNIT OF COMPETENCY : PERFORM FIREARMS MAINTENANCE AND CLEANING**

**UNIT CODE : AB-MEE1380700722304**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitude required to perform firearms maintenance and cleaning. It includes Identify firearms platform, disassembling firearm, cleaning firearm, requesting technical inspection, assembling firearm and conducting function check for firearm

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify firearms platform	1.1 <b>Firearm platform</b> is categorized based on its design and caliber 1.2 <b>Firearm variants</b> are distinguished based on firearm platform 1.3 Determine the firearm make and model based on registered identification	<b>Science</b> 1.1 Types of firearms platforms 1.2 Variants of firearms platforms 1.3 Mechanism of specific platform	1.1 Enumerating different firearm platform 1.2 Familiarizing specific firearm platform 1.3 Explaining particular firearm platform
2. Disassemble firearm	2.1 Steps in disassemble are followed based on company procedure 2.2 Tools are utilized based on its purpose 2.3 Disassembled parts are arranged based on work instruction 2.4 <b>Gun safety protocol</b> is observed based on OSH Standards	<b>Communication</b> 2.1 Steps in disassembly 2.2 Gun safety awareness 2.3 Appropriate PPEs <b>Technology</b> 2.4 Types of tools	2.1 Following steps in disassembly 2.2 Handling gun safely 2.3 Using proper tools 2.4 Wearing of PPEs
3. Clean firearm	3.1 <b>Tools for cleaning</b> are identified based on company	<b>Communication</b> 3.1 Appropriate PPEs	3.1 Wearing appropriate PPE

	<p>procedure</p> <p>3.2 PPE is observed based on OSH Standards</p> <p>3.3 Steps in correct <b>cleaning procedures</b> are followed based on users' manual</p> <p>3.4 Cleaning tools are used and maintained based on user's manual</p>	<p>3.2 Steps in correct cleaning</p> <p>3.3 Types of cleaning tools</p> <p>3.4 Gun safety awareness</p> <p>3.5 Familiarization of cleaning procedures</p>	<p>3.2 Handling gun safely</p> <p>3.3 Applying cleaning tools correctly</p> <p>3.4 Cleaning firearm properly</p>
4. Request technical inspection	<p>4.1 Request for Technical Inspection is prepared based on job order/directives</p> <p>4.2 Request for Technical Inspection is accomplish based on job order/directives</p> <p>4.3 Verify firearm parts completeness based on parts list</p> <p>4.4 Notify <b>Authorized personnel</b> for inspection based on company procedure</p> <p>4.5 Prepare and secure post <b>inspection report</b> based on company procedure</p>	<p><b>Communication</b></p> <p>4.1 Technical Inspection and acceptance procedure</p> <p>4.2 Technical Inspection form</p> <p>4.3 Assessment protocol</p>	<p>4.1 Complying with Technical Inspection and Acceptance procedure</p> <p>4.2 Accomplishing Technical Inspection form</p> <p>4.3 Following assessment protocol</p>
5. Assemble firearm	<p>5.1 Steps in assembly are followed based on work instruction</p> <p>5.2 <b>Gun safety protocol</b> is observed based on OSH Standards</p> <p>5.3 Parts are assembled based on work instruction</p>	<p><b>Communication</b></p> <p>5.1 Steps in assembly</p> <p>5.2 Gun safety awareness</p> <p>5.3 Appropriate PPEs</p> <p><b>Technology</b></p> <p>5.4 Types of tools</p>	<p>5.1 Following steps in assembly</p> <p>5.2 Using proper tools</p> <p>5.3 Handling gun safely</p> <p>5.4 Wearing PPEs</p>

<p>6. Conduct function check for firearm</p>	<p>6.1 Firearm function is checked based on cycle of operation</p> <p>6.2 <b><i>Cycle of operation</i></b> is established based on firearm mechanical process</p> <p>6.3 Firearm safety protocol is observed based on OSH Standards</p> <p>6.4 Appropriate PPE is worn based on OSH standards</p>	<p><b>Science</b></p> <p>6.1 Familiarization of cycle of operation</p> <p>6.2 Basic functions of firearm</p> <p><b>Communication</b></p> <p>6.3 Gun safety awareness</p> <p>6.4 Appropriate PPE</p>	<p>6.1 Performing basic functions</p> <p>6.2 Wearing appropriate PPE</p> <p>6.3 Handling gun safely</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Firearm Platform	This may include but not limited to: 1.1 Pistol 1.2 Revolver 1.3 Rifle 1.4 Shotgun
2. Firearm Variants	This may include but not limited to: 2.1 Pistol 2.1.1 Hammer fired 2.1.2 Striker fired 2.1.3 Internal hammer 2.2 Shotgun 2.2.1 Semi-auto 2.2.2 Pump 2.3 Revolver 2.4 Rifle 2.4.1 Semi-auto 2.4.2 Full auto 2.4.3 Bolt action
3. Gun safety protocol	This may include but not limited to: 3.1 Golden rules 3.1.1 Always treat the gun was loaded 3.1.2 Be sure of your target and behind it. 3.1.3 Always keep your finger off the trigger 3.1.4 Never point the gun at anything you don't intend to destroy or shoot.
4. Cycle of Operation	This may include but not limited to: 4.1 Feeding 4.2 Chambering 4.3 Locking 4.4 Unlocking 4.5 Extracting 4.6 Ejecting 4.7 Firing 4.8 Cocking
5. Authorized personnel	This may include but not limited to: 5.1 Trainer 5.2 Assessor
6. Tools for Cleaning	This may include but not limited to: 6.1 Brush 6.2 Rod 6.3 Patches 6.4 Bore Snake 6.5 Gun Oil 6.6 Cotton Swab

	6.7 Cleaning matt 6.8 Cotton Rugs
7. Cleaning Procedures	This may include but not limited to: 7.1 Ensure safety first 7.2 Clean the barrel 7.3 Clean other components 7.4 Clean and lubricate 7.5 Final wipe (excess oil)
8. Inspection report	This may include but not limited to: 8.1 Parts 8.2 Diagnosis 8.3 Recommendation 8.4 Remarks 8.5 Signatories 8.6 Control number 8.7 Revision number

## EVIDENCE GUIDE

<p>1. Critical aspect of competencies</p>	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Identified firearm platform based on category</li> <li>1.2 Distinguished firearm types and variants based on classification</li> <li>1.3 Applied appropriate firearm procedures specific to platform and job description</li> <li>1.4 Identified firearm parts based on form and placement</li> <li>1.5 Classified basic functions of firearm parts based on cycle of operation</li> <li>1.6 Established interconnection and interrelation of firearm parts based on cycle of operation</li> <li>1.7 Worn personal protective equipment based on OSH standards</li> <li>1.8 Followed firearm disassembly steps according to procedure</li> <li>1.9 Used disassembly tools based on function</li> <li>1.10 Stored disassembled parts according to procedure</li> <li>1.11 Demonstrated gun safety protocols based on industry standards</li> <li>1.12 Followed firearm assembly steps according to procedure</li> <li>1.13 Used appropriate tools based on function</li> <li>1.14 Verified completeness of firearm parts based on function and placement</li> <li>1.15 Worn personal protective equipment based on OSH standards</li> <li>1.16 Checked firearm functionality based on cycle of operation</li> <li>1.17 Established cycle of operation based on firearm mechanical process</li> <li>1.18 Demonstrated gun safety protocols based on industry standards</li> </ul>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Tools, equipment, and materials relevant to the activity to be performed</li> <li>2.2 Actual safety area with complete facilities</li> </ul>
<p>3. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Demonstration with oral questioning</li> <li>3.2 Direct observation</li> <li>3.3 Written test</li> </ul>

4. Context for Assessment	4.1 Competency may be assessed in actual safety area or simulated safety area 4.2 Assessment done during students return demonstration
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## GLOSSARY OF TERMS

<b>5S</b>	refers to 5S of Good Housekeeping (Seiri-Sort, Seiton-Segregate, Seiso-Sanitize, Seiketsu-Standardize, Shitsuke-Sustain)
<b>BACKSTOP AREA (ESTABLISH TEST AREA)</b>	is a structure constructed to stop or redirect bullets fired on a range
<b>BALLISTIC BEHAVIOR</b>	is a study of how a projectile moves through the air after it leaves the gun barrel
<b>EXHAUST SYSTEM (IN FIREARMS)</b>	is to safely route exhaust gases caused by the burn powder from the fired ammunition so that the gasses can be exhausted from the firearm
<b>GUNSMITH</b>	is a person who makes, designs, customizes, sells, and repairs firearms
<b>GUNSMITHING</b>	is the art or trade of making, repairing, modifying, or designing firearms, ensuring proper function and performance
<b>MANMADE HAZARDS (SIGNAGES)</b>	are events caused by human error
<b>MECHANISM (IN FIREARMS)</b>	contains the moving components of the firearm that enable loading, firing, unloading and ejection features
<b>OSH</b>	Occupational Safety and Health
<b>PPE</b>	Personal Protective Equipment
<b>PROPER VENTILATION (EXHAUST SYSTEM)</b>	prevents buildup of gasses from burned gun powder within indoor firing ranges
<b>SAFETY EQUIPMENT (IN FIREARMS)</b>	prevents firearm-related accidents to help ensure safety
<b>SANDBLASTING MACHINE (IN FIREARMS)</b>	is used to remove rust, paint, and residue from corrosion of materials to clean and improve the condition of the metal's surface
<b>STEEL PLATE (IN FIREARMS)</b>	reinforces the structure of the firing range backstop

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