COMPETENCY STANDARDS

PRODUCTION OPERATION (DEFLASHING) LEVEL III



MANUFACTURING SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY East Service Road, South Luzon Expressway (SLEX), Taguig City, Metro Manila

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COMPETENCY STANDARDS FOR PRODUCTION OPERATION (DEFLASHING) LEVEL III

The **PRODUCTION OPERATION (DEFLASHING) LEVEL III** consists of competencies that a person must achieve in strip loading and unloading, monitoring, analyzing foreign matter, activating deflash machine, checking required machine parameters, checking the control plan requirements, and checking the traveler's card and other documents.

The Units of Competency comprising this Qualification include the following:

- UNIT CODE BASIC COMPETENCIES
- 400311319 Lead workplace communication
- 400311320 Lead small teams
- **400311321** Apply critical thinking and problem solving techniques in the workplace
- 400311322 Work in a diverse environment
- **400311323** Propose methods of applying learning and innovation in the organization
- 400311324 Use information systematically
- 400311325 Evaluate occupational safety and health work practices
- 400311326 Evaluate environmental work practices
- **400311327** Facilitate entrepreneurial skills for micro-small-medium enterprises (MSMEs)
- UNIT CODE COMMON COMPETENCIES
- ELC311205 Use Hand Tools
- **ELC311204** Apply Quality Standards
- ELC311203 Perform Computer Operations

UNIT CODE CORE COMPETENCIES

- CS-ELC821329 Do strip loading
- **CS-ELC821330** Do strip unloading
- CS-ELC821331 Perform process and product monitoring
- CS-ELC821332 Analyzing foreign matter
- CS-ELC821333 Activate deflash machine to production mode
- **CS-ELC821334** Check required machine parameters
- CS-ELC821335 Check the control plan requirements

A person who has achieved this Qualification is competent to be a:

• Production Operator (Deflashing)

SECTION 2 COMPETENCY STANDARDS

This section details the contents of the basic, common and core units of competency required in **PRODUCTION OPERATION (DEFLASHING) LEVEL III.**

BASIC COMPETENCIES

UNIT OF COMPETENCY	: LEAD WORKPLACE COMMUNICATION

UNIT CODE : 400311319

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to lead in the effective dissemination and discussion of ideas, information, and issues in the workplace. This includes preparation of written communication materials.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Communicate information about workplace processes	 1.1 Relevant <i>communication method</i> is selected based on workplace procedures 1.2 Multiple operations involving several topics/areas are communicated following enterprise requirements 1.3 Questioning is applied to gain extra information 1.4 Relevant sources of information are identified in accordance with workplace/ client requirements 1.5 Information is selected and organized following enterprise procedures 1.6 Verbal and written required 	 1.1. Organization requirements for written and electronic communication methods 1.2. Effective verbal communication methods 1.3. Business writing 1.4. Workplace etiquette 	 1.1 Organizing information 1.2 Conveying intended meaning 1.3 Participating in a variety of workplace discussions 1.4 Complying with organization requirements for the use of written and electronic communication methods 1.5 Effective business writing 1.6 Effective clarifying and probing skills 1.7 Effective questioning techniques (clarifying and probing)

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	1.7 Communication and negotiation skills are applied and maintained in all relevant situations		
2. Lead workplace discussions	 2.1 Response to workplace issues are sought following enterprise procedures 2.2 Response to workplace issues are provided immediately 2.3 Constructive contributions are made to workplace discussions on such issues as production, quality and safety 2.4 Goals/ objectives and action plans undertaken in the workplace are communicated promptly 	 2.1 Organization requirements for written and electronic communication methods 2.2 Effective verbal communication methods 2.3 Workplace etiquette 	 2.1 Organizing information 2.2 Conveying intended meaning 2.3 Participating in variety of workplace discussions 2.4 Complying with organization requirements for the use of written and electronic communication methods 2.5 Effective clarifying and probing skills
3. Identify and communicate issues arising in the workplace	 3.1 Issues and problems are identified as they arise 3.2 Information regarding problems and issues are organized coherently to ensure clear and effective communication 3.3 Dialogue is initiated with appropriate personnel 3.4 Communication and problems and 	 3.1 Organization requirements for written and electronic communication methods 3.2 Effective verbal communication methods 3.3 Workplace etiquette 3.4 Communication problems and issues 3.5 Barriers in communication 	 3.1 Organizing information 3.2 Conveying intended meaning 3.3 Participating in a variety of workplace discussions 3.4 Complying with organization requirements for the use of written and electronic communication methods 3.5 Effective clarifying and probing skills 3.6 Identifying issues

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	issues are raised as they arise 3.5 Identify barriers in communication to be addressed appropriately		3.7 Negotiation and communication skills

RANGE OF VARIABLE

VARIABLE	RANGE
1. Methods of	May include:
communication	1.1 Non-verbal gestures
	1.2 Verbal
	1.3 Face-to-face
	1.4 Two-way radio
	1.5 Speaking to groups
	1.6 Using telephone
	1.7 Written
	1.8 Internet
2. Workplace discussions	May include:
	2.1 Coordination meetings
	2.2 Toolbox discussion
	2.3 Peer-to-peer discussion

1. Critical aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Dealt with a range of communication/information
	at one time
	1.2 Demonstrated leadership skills in workplace
	communication
	 Made constructive contributions in workplace issues
	1.4 Sought workplace issues effectively
	1.5 Responded to workplace issues promptly
	1.6 Presented information clearly and effectively
	written form
	1.7 Used appropriate sources of information
	1.8 Asked appropriate questions
	1.9 Provided accurate information
2. Resource Implications	The following resources should be provided:
	2.1 Variety of Information
	2.2 Communication tools
	2.3 Simulated workplace
3. Methods of Assessment	Competency in this unit may be assessed through:
	3.1 Case problem
	3.2 Third-party report
	3.3 Portfolio
	3.4 Interview
	3.5 Demonstration/Role-playing
4. Context of Assessment	4.1 Competency may be assessed in the workplace
	or in a simulated workplace environment

UNIT OF COMPETENCY

: LEAD SMALL ITEMS

UNIT CODE

: 400311320

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes to lead small teams including setting, maintaining and monitoring team and individual performance standards.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Provide team leadership	 1.1 Work requirements are identified and presented to team members based on company policies and procedures 1.2 Reasons for instructions and requirements are communicated to team members based on company policies and procedures 1.3 Team members' and leaders' concerns are recognized, discussed and dealt with based on company practices 	 1.1 Facilitation of Team work 1.2 Company policies and procedures relating to work performance 1.3 Performance standards and expectations 1.4 Monitoring individual's and team's performance vis a vis client's and group's expectations 	 1.1 Communication skills required for leading teams 1.2 Group facilitation skills 1.3 Negotiating skills 1.4 Setting performance expectation
2. Assign responsibilities	 2.1 Responsibilities are allocated having regard to the skills, knowledge and aptitude required to undertake task based on company policies 2.2 Duties are allocated having regard to individual preference, domestic and 	 2.1 Work plan and procedures 2.2 Work requirements and targets 2.3 Individual and group expectations and assignments 2.4 Ways to improve group leadership and membership 	 2.1 Communication skills 2.2 Management Skills Negotiating skills 2.3 Evaluation skills 2.4 Identifying team member's strengths and rooms for improvement

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	personal considerations, whenever possible		
3. Set performance expectations for team members	 3.1 Performance expectations are established based on client needs 3.2 Performance expectations are based on individual team member's knowledge, skills and aptitude 3.3 Performance expectations are discussed and disseminated to individual team members 	 3.1 One's roles and responsibilities in the team 3.2 Feedback giving and receiving 3.3 Performance expectation 	 3.1 Communication skills 3.2 Accurate empathy 3.3 Congruence 3.4 Unconditional positive regard 3.5 Handling of Feedback
4. Supervise team performance	 4.1 Performance is monitored based on defined performance criteria and/or assignment instruction 4.2 Team members are provided with feedback, positive support and advice on strategies to overcome any deficiencies based on company practices 4.3 Performance issues which cannot be rectified or addressed within the team are referred to 	 4.1 Performance coaching 4.2 Performance management 4.3 Performance issues 	4.1 Communication skills required for leading teams4.2 Coaching skill

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	appropriate personnel according to employer policy 4.4 Team members are kept informed of any changes in the priority allocated to assignments or tasks which might impact on client/customer needs and satisfaction 4.5 Team operations are monitored to ensure that employer/client needs and requirements are met 4.6 Follow-up communication is provided on all issues affecting the team 4.7 All relevant documentation is completed on accordance with company procedures		

RANGE OF VARIABLE

VARIABLE	RANGE
1. Work requirements	May include:
	1.1 Client profile
	1.2 Assignment instructions
2. Team member's	May include:
concerns	2.1 Roster/shift details
3. Monitor performance	May include:
	3.1 Formal process
	3.2 Informal process
4. Feedback	May include:
	4.1 Formal process
	4.2 Informal process
5. Performance issues	May include:
	5.1 Work output
	5.2 Work quality
	5.3 Team participation
	5.4 Compliance with workplace protocols
	5.5 Safety
	5.6 Customer service

1 Oritical concete of	
1. Critical aspects of Competency	 Assessment requires evidence that the candidate: 1.1 Maintained or improved individuals and/or team performance given a variety of possible scenario 1.2 Assessed and monitored team and individual performance against set criteria 1.3 Represented concerns of a team and individual to next level of management or appropriate specialist and to negotiate on their behalf 1.4 Allocated duties and responsibilities, having regard to individual's knowledge, skills and aptitude and the needs of the tasks to be performed 1.5 Set and communicated performance expectations for a range of tasks and duties within the team and provided feedback to team members
2. Resource Implications	 The following resources should be provided: 2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2 Materials relevant to the proposed activity or task
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written examination 3.2 Oral Questioning 3.3 Portfolio

4. Context of Assessment	4.1 Competency may be assessed in the workplace
	or in a simulated workplace environment

UNIT OF COMPETENCY

: APPLY CRITICAL THINKING AND PROBLEM-SOLVING TECHNIQUES IN THE WORKPLACE

UNIT CODE : 400311321

UNIT DESCRIPTOR : This unit 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/s of specific problems in the workplace.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Examine specific workplace challenges	 1.1 Variances are examined from normal operating <i>parameters;</i> and product quality. 1.2 Extent, cause and nature of the specific problem are defined through observation, investigation and <i>analytical techniques.</i> 1.3 <i>Problems</i> are clearly stated and specified. 	 1.1 Competence includes a thorough 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, enough for the identification of fundamental causes of specific workplace challenges. 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 information systems and data collation 	 1.1 Using range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 1.2 Identifying extent and causes of specific challenges in the workplace.

	ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2.	Analyze the causes of specific workplace challenges	 2.1 Possible causes of specific problems are identified based on experience and the use of problem solving tools / analytical techniques. 2.2 Possible cause statements are developed based on findings. 2.3 Fundamental causes are identified per results of investigation conducted. 	 1.7 Industry codes and standards 2.1 Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations. 2.2 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations. 2.3 Relevant equipment and operational processes. 2.4 Enterprise goals, targets and measures. 2.5 Enterprise quality 2.6 OSH and environmental requirement. 2.7 Enterprise information systems and data collation. 2.8 Industry codes and standards. 	 2.1 Using range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 2.2 Identifying extent and causes of specific challenges in the workplace. 2.3 Providing clear- cut findings on the nature of each identified workplace challenges.
3	Formulate resolutions to specific workplace challenges	 3.1 All possible options are considered for resolution of the problem. 3.2 Strengths and weaknesses of 	3.5 Competence includes a thorough knowledge and understanding of the process,	3.1 Using range of analytical techniques (e.g., planning, attention, simultaneous

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 possible options are considered. 3.3 Corrective actions are determined to resolve the problem and possible future causes. 3.4 Action plans are developed identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures 	normal operating parameters, and product quality to recognize nonstandard situations. 3.6 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations. 3.7 Relevant equipment and operational processes. 3.8 Enterprise goals, targets and measures. 3.9 Enterprise quality OSH and environmental requirement. 3.10 Enterprise information systems and data collation. 3.11 Industry codes and standards.	and successive processing of information) in examining specific challenges in the workplace. 3.2 Identifying extent and causes of specific challenges in the workplace. 3.3 Providing clear- cut findings on the nature of each identified workplace challenges. 3.4 Devising, communicating, implementing and evaluating strategies and techniques in addressing specific workplace challenges.
4 Implement action plans and communicate results	 4.1 Action plans are implemented and evaluated. 4.2 Results of plan implementation and recommendations are prepared. 4.3 Recommendations are presented to appropriate personnel. 4.4 Recommendations are followed-up, if required. 	 4.1 Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations. 4.2 Competence to include the ability to apply and 	 4.1 Using range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 4.2 Identifying extent and

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		 explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations. 4.3 Relevant equipment and operational processes. 4.4 Enterprise goals, targets and measures. 4.5 Enterprise quality OSH and environmental requirement. 4.6 Enterprise information systems and data collation. 4.7 Industry codes and standards. 	causes of specific challenges in the workplace. 4.3 Providing clear- cut findings on the nature of each identified workplace challenges. 4.4 Devising, communicating, implementing and evaluating strategies and techniques in addressing specific workplace challenges.

RANGE OF VARIABLE

VARIABLE	RANGE
1. Parameters	May include:
	1.1 Processes
	1.2 Procedures
	1.3 Systems
2. Analytical techniques	May include:
	2.1 Brainstorming
	2.2 Intuitions/Logic
	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. Problem	May include:
	3.1 Routine, non – routine and complex workplace and
	quality problems
	3.2 Equipment selection, availability and failure
	3.3 Teamwork and work allocation problem
	3.4 Safety and emergency situations and incidents
	3.5 Risk assessment and management
4. Action plans	May include:
	4.1 Priority requirements
	4.2 Measurable objectives
	4.3 Resource requirements
	4.4 Timelines
	4.5 Co-ordination and feedback requirements
	4.6 Safety requirements
	4.7 Risk assessment
	4.8 Environmental requirements

1. Critical aspects of Competency	 Assessment requires evidence that the candidate: 1.1 Examined specific workplace challenges 1.2 Analyzed the causes of specific workplace challenges 1.3 Formulated resolutions to specific workplace challenges 1.4 Implemented action plans and communicated results on specific workplace challenges
2. Resource Implications	 2.1 Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios / case studies / what ifs will be required as well as bank of questions which will be used to probe the reason behind the observable action.
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Observation 3.2 Case Formulation 3.3 Life Narrative Inquiry 3.4 Standardized Test
	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.
4. Context of Assessment	In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY: WORK IN A DIVERSE ENVIRONMENTUNIT CODE: 400311322UNIT DESCRIPTOR: This unit covers the outcomes required to work
offectively in a workplace characterized by diversity

: This unit covers the outcomes required to work effectively in a workplace characterized by diversity in terms of religions, beliefs, races, ethnicities and other differences.

	ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1.	Develop an individual's cultural awareness and sensitivity	 1.1 Individual differences with clients, customers and fellow workers are recognized and respected in accordance with enterprise policies and core values. 1.2 Differences are responded to in a sensitive and considerate manner 1.3 <i>Diversity</i> is accommodated using appropriate verbal and nonverbal communication. 	 1.1 Understanding cultural diversity in the workplace 1.2 Norms of behavior for interacting and dialogue with specific groups (e. g., Muslims and other nonChristians, nonCatholics, tribes/ethnic groups, foreigners) 1.3 Different methods of verbal and nonverbal communication in a multicultural setting 	 1.1 Applying cross- cultural communication skills (i.e. different business customs, beliefs, communication strategies) 1.2 Showing affective skills – establishing rapport and empathy, understanding, etc. 1.3 Demonstrating openness and flexibility in communication 1.4 Recognizing diverse groups in the workplace and community as defined by divergent culture, religion, traditions and practices
2.	Work effectively in an environment that acknowledges and values cultural diversity	2.1 Knowledge, skills and experiences of others are recognized and documented in relation to team objectives.	 2.1 Value of diversity in the economy and society in terms of Workforce development 2.2 Importance of inclusiveness in a 	2.1 Demonstrating cross-cultural communication skills and active listening 2.2 Recognizing diverse groups

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 2.2 Fellow workers are encouraged to utilize and share their specific qualities, skills or backgrounds with other team members and clients to enhance work outcomes. 2.3 Relations with customers and clients are maintained to show that diversity is valued by the business. 	diverse environment 2.3 Shared vision and understanding of and commitment to team, departmental, and organizational goals and objectives 2.4 Strategies for customer service excellence	in the workplace and community as defined by divergent culture, religion, traditions and practices 2.3 Demonstrating collaboration skills 2.4 Exhibiting customer service excellence
3. Identify common issues in a multicultural and diverse environment	 3.1 Diversity-related conflicts within the workplace are effectively addressed and resolved. 3.2 Discriminatory behaviors towards customers / stakeholders are minimized and addressed accordingly. 3.3 Change management policies are in place within the organization. 	 3.1 Value, and leverage of cultural diversity 3.2 Inclusivity and conflict resolution 3.3 Workplace harassment 3.4 Change management and ways to overcome resistance to change 3.5 Advanced strategies for customer service excellence 	 3.1 Addressing diversity-related conflicts in the workplace 3.2 Eliminating discriminatory behavior towards customers and coworkers 3.3 Utilizing change management policies in the workplace

RANGE OF VARIABLES

VARIABLE	RANGE
1. Diversity	This refers to diversity in both the workplace and the
	community and may include divergence in:
	1.1 Religion
	1.2 Ethnicity, race or nationality
	1.3 Culture
	1.4 Gender, age or personality
	1.5 Educational background
2. Diversity – related conflicts	May include conflicts that result from:
	2.1 Discriminatory behaviors
	2.2 Differences of cultural practices
	2.3 Differences of belief and value systems
	2.4 Gender-based violence
	2.5 Workplace bullying
	2.6 Corporate jealousy
	2.7 Language barriers
	2.8 Individuals being differently-abled persons
	2.9 Ageism (negative attitude and behavior towards
	old people)

1. Critical Aspects of Competency	 Assessment requires evidence that the candidate: 1.1 Adjusted language and behavior as required by interactions with diversity 1.2 Identified and respected individual differences in colleagues, clients and customers 1.3 Applied relevant regulations, standards and codes of practice
2. Resource Implications	The following resources should be provided: 2.1 Access to workplace and resources 2.2 Manuals and policies on Workplace Diversity
3. Methods of Assessment	 Competency in this unit may be assessed through: 3.1 Demonstration or simulation with oral questioning 3.2 Group discussions and interactive activities 3.3 Case studies/problems involving workplace diversity issues 3.4 Third-party report 3.5 Written examination 3.6 Role Plays
4. Context for Assessment	Competency assessment may occur in workplace or any appropriately simulated environment

UNIT OF COMPETENCY : PROPOSE METHODS OF APPLYING LEARNING AND INNOVATION IN THE ORGANIZATION

- UNIT CODE : 400311323
- **UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes required to assess general obstacles in the application of learning and innovation in the organization and to propose practical methods of such in addressing organizational challenges.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Assess work procedures, processes and systems in terms of innovative practices	 1.1. <i>Reasons</i> for innovation are incorporated to work procedures. 1.2. <i>Models of</i> <i>innovation</i> are researched. 1.3. <i>Gaps or barriers</i> <i>to</i> innovation in one's work area are analyzed. 1.4. Staff who can support and foster innovation in the work procedure are identified. 	 1.1 Seven habits of highly effective people. 1.2 Character strengths that foster innovation and learning (Christopher Peterson and Martin Seligman, 2004) 1.3 Five minds of the future concepts (Gardner, 2007). 1.4 Adaptation concepts in neuroscience (Merzenich, 2013). 1.5 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992). 	 1.1 Demonstrating collaboration and networking skills. 1.2 Applying basic research and evaluation skills 1.3 Generating insights on how to improve organizational procedures, processes and systems through innovation.
2. Generate practical action plans for improving work procedures, processes	 2.1 Ideas for innovative work procedure to foster innovation using individual and group techniques are conceptualized 2.2 Range of ideas with other team members and 	 2.1 Seven habits of highly effective people. 2.2 Character strengths that foster innovation and learning (Christopher Peterson and Martin Seligman, 2004) 	 2.1 Assessing readiness for change on simple work procedures, processes and systems. 2.2 Generating insights on how to improve organizational procedures,

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	colleagues are evaluated and discussed 2.3 Work procedures and processes subject to change are selected based on workplace requirements (feasible and innovative). 2.4 Practical action plans are proposed to facilitate simple changes in the work procedures, processes and systems. 2.5 Critical inquiry is applied and used to facilitate discourse on adjustments in the simple work processes and systems.	 2.3 Five minds of the future concepts (Gardner, 2007). 2.4 Adaptation concepts in neuroscience (Merzenich, 2013). 2.5 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992). 	processes and systems through innovation. 2.3 Facilitating action plans on how to apply innovative procedures in the organization.
3 Evaluate the effectiveness of the proposed action plans	 3.1 Work structure is analyzed to identify the impact of the new work procedures 3.2 Co-workers/key personnel is consulted to know who will be involved with or affected by the work procedure 3.3 Work instruction operational plan of the new work procedure is developed and evaluated. 	 2.1 Five minds of the future concepts (Gardner, 2007). 2.2 Adaptation concepts in neuroscience (Merzenich, 2013). 2.3 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992). 	 3.1 Generating insights on how to improve organizational procedures, processes and systems through innovation. 3.2 Facilitating action plans on how to apply innovative procedures in the organization. 3.3 Communicating results of the evaluation of the proposed and implemented changes in the

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 3.4 Feedback and suggestion are recorded. 3.5 Operational plan is updated. 3.6 Results and impact on the developed work instructions are reviewed 3.7 Results of the new work procedure are evaluated 3.8 Adjustments are recommended based on results gathered 		workplace procedures and systems. 3.4 Developing action plans for continuous improvement on the basic systems, processes and procedures in the organization.

RANGE OF VARIABLES

VARIABLE	RANGE	
1. Diversity	May include:	
	1.1 Strengths and weaknesses of the current	
	systems, processes and procedures.	
	2.10 1.2 Opportunities and threats of the	
	current systems, processes and procedures.	
2. Models of Innvotation	May include:	
	2.1 Seven habits of highly effective people.	
	2.2 Five minds of the future concepts (Gardner,	
	2007).	
	2.11 2.3 Neuroplasticity and	
	adaptation strategies.	
3. Gaps or barriers	May include:	
	3.1 Machine	
	3.2 Manpower	
	3.3 Methods	
	3.4 Money	
4. Critical Inquiry	May include:	
	4.1 Preparation.	
	4.2 Discussion.	
	4.3 Clarification of goals.	
	4.4 Negotiate towards a Win-Win outcome.	
	4.5 Agreement.	
	4.6 Implementation of a course of action.	
	4.7 Effective verbal communication. See our	
	pages: Verbal Communication and Effective	
	Speaking.	
	4.8 Listening.	
	4.9 Reducing misunderstandings is a key part of	
	effective negotiation.	
	4.10 Rapport Building.	
	4.11 Problem Solving.	
	4.12 Decision Making.	
	4.13 Assertiveness.	
	4.14 Dealing with Difficult Situations.	

1 Critical Aspects of	According to a wide the the condicients
1. Critical Aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Established the reasons why innovative systems
	are required
	1.2 Established the goals of a new innovative
	system
	1.3 Analyzed current organizational systems to
	identify gaps and barriers to innovation.
	1.4 Assessed work procedures, processes and
	systems in terms of innovative practices.
	1.5 Generate practical action plans for improving work
	procedures, and processes.
	1.6 Reviewed the trial innovative work system and
	adjusted reflect evaluation feedback,
	knowledge management systems and future
	planning.
	1.7 Evaluated the effectiveness of the proposed
	action plans.
2. Resource Implications	The following resources should be provided:
	2.1 Pens, papers and writing implements.
	2.2 Cartolina.
	2.3 Manila papers.
3. Methods of Assessment	Competency in this unit may be assessed through:
	3.1 Psychological and behavioral Interviews.
	3.2 Performance Evaluation.
	3.3 Life Narrative Inquiry.
	3.4 Review of portfolios of evidence and third-party
	workplace reports of on-the-job performance.
	3.5 Sensitivity analysis.
	3.6 Organizational analysis.
	3.7 Standardized assessment of character strengths
	and virtues applied.
4. Context for Assessment	4.1 Competency may be assessed individually in
	the actual workplace or simulation environment
	in TESDA accredited institutions.

UNIT OF COMPETENCY : USE INFORMATION SYSTEMATICALLY

UNIT CODE : 400311324

UNIT DESCRIPTOR

: This unit covers the knowledge, skills and attitudes required to use technical information systems, apply information technology (IT) systems and edit, format & check information.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Use technical information	 1.1. Information are collated and organized into a suitable form for reference and use 1.2. Stored information are classified so that it can be quickly identified and retrieved when needed 1.3. Guidance are advised and offered to people who need to find and use information 	 1.1. Application in collating information 1.2. Procedures for inputting, maintaining and archiving information 1.3. Guidance to people who need to find and use information 1.4. Organize information 1.5. classify stored information for identification and retrieval 1.6. Operate the technical information system by using agreed procedures 	 1.1. Collating information 1.2. Operating appropriate and valid procedures for inputting, maintaining and archiving information 1.3. Advising and offering guidance to people who need to find and use information 1.4. Organizing information into a suitable form for reference and use 1.5. Classifying stored information for identification and retrieval 1.6. Operating the technical information system by using agreed procedures
2. Apply information technology (IT)	2.1. Technical <i>information</i> system is operated using	2.1. Attributes and limitations of available software tools	2.1. Identifying attributes and limitations of

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	agreed procedures 2.2. Appropriate and valid procedures are operated for inputting, maintaining and archiving information 2.3. Software required are utilized to execute the project activities 2.4. Information and data obtained are handled, edited, formatted and checked from a range of internal and external sources 2.5. Information are extracted, entered, and processed to produce the outputs required by customers 2.6. Own skills and understanding are shared to help others 2.7. Specified security measures are implemented to protect the confidentiality and integrity of project data held in IT systems	 2.2. Procedures and work instructions for the use of IT 2.3. Operational requirements for IT systems 2.4. Sources and flow paths of data 2.5. Security systems and measures that can be used 2.6. Extract data and format reports 2.7. Methods of entering and processing information 2.8. WWW enabled applications 	available software tools 2.2. Using procedures and work instructions for the use of IT 2.3. Describing operational requirements for IT systems 2.4. Identifying sources and flow paths of data 2.5. Determining security systems and measures that can be used 2.6. Extracting data and format reports 2.7. Describing methods of entering and processing information 2.8. Using WWW applications
3. Edit, format and check information	3.1 Basic editing techniques are used	3.1 Basic file handling techniques3.2 Techniques in checking documents	3.1 Using basic file handling techniques is used for the software

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 3.2 Accuracy of documents are checked 3.3 Editing and formatting tools and techniques are used for more complex documents 3.4 Proof reading techniques is used to check that documents look professional 	3.3 Techniques in editing and formatting3.4 Proof reading techniques	 3.2 Using different techniques in checking documents 3.3 Applying editing and formatting techniques 3.4 Applying proof reading techniques

RANGE OF VARIABLES

VARIABLE	RANGE	
1. Information	May include:	
	1.1. Property	
	1.2. Organizational	
	1.3. Technical reference	
2. Technical information	May include:	
	2.1. paper based	
	2.2. electronic	
3. Software	May include:	
	3.1. spreadsheets	
	3.2. databases	
	3.3. word processing	
	3.4. presentation	
4. Sources	May include:	
	4.1. other IT systems	
	4.2. manually created	
	4.3. within own organization	
	4.4. outside own organization	
	4.5. geographically remote	
5. Customers	May include:	
	5.1. colleagues	
	5.2. company and project management 5.3.	
	clients	
6. Security measures	May include:	
	6.1. access rights to input;	
	6.2. passwords;	
	6.3. access rights to outputs;	
	6.4. data consistency and back-up;	
	6.5. recovery plans	

1. Critical aspects of Competency	 Assessment requires evidence that the candidate: 1.1. Used technical information systems and information technology 1.2. Applied information technology (IT) systems 1.3. Edited, formatted and checked information 	
2. Resource Implications	The following resources should be provided: 2.1. Computers 2.2. Software and IT system	
3. Methods of Assessment	Competency in this unit should be assessed through: 3.1. Direct Observation 3.2. Oral interview and written test	

4. Context for Assessment	4.1. Competency may be assessed individually in the actual workplace or through accredited institution

E Critical Aspects of	Accomment requires suideness that the condidates
5. Critical Aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Established the reasons why innovative systems
	are required
	1.2 Established the goals of a new innovative
	system
	1.3 Analyzed current organizational systems to
	identify gaps and barriers to innovation.
	1.4 Assessed work procedures, processes and
	systems in terms of innovative practices.
	1.5 Generate practical action plans for improving work
	procedures, and processes.
	1.6 Reviewed the trial innovative work system and
	adjusted reflect evaluation feedback,
	knowledge management systems and future
	planning.
	1.7 Evaluated the effectiveness of the proposed
	action plans.
6. Resource Implications	The following resources should be provided:
	2.1 Pens, papers and writing implements.
	2.2 Cartolina.
	2.3 Manila papers.
7. Methods of Assessment	Competency in this unit may be assessed through:
	3.1 Psychological and behavioral Interviews.
	3.2 Performance Evaluation.
	3.3 Life Narrative Inquiry.
	3.4 Review of portfolios of evidence and third-party
	workplace reports of on-the-job performance.
	3.5 Sensitivity analysis.
	3.6 Organizational analysis.
	3.7 Standardized assessment of character strengths
	and virtues applied.
8. Context for Assessment	4.1 Competency may be assessed individually in
	the actual workplace or simulation environment
	in TESDA accredited institutions.

UNIT OF COMPETENCY : EVALUATE OCCUPATIONAL SAFETY AND HEALTH WORK PRACTICES

UNIT CODE : 400311325

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to interpret-Occupational Safety and Health practices, set OSH work targets, and evaluate effectiveness of Occupational Safety and Health work instructions

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Interpret Occupational Safety and Health practices	 1.1 OSH work practices issues are identified relevant to work requirements 1.2 OSH work standards and procedures are determined based on applicability to nature of work 1.3 Gaps in work practices are identified related to relevant OSH work standards 	 1.1.OSH work practices issues 1.2.OSH work standards 1.3.General OSH principles and legislations 1.4.Company/ workplace policies/ guidelines 1.5.Standards and safety requirements of work process and procedures 	 1.1. Communication skills 1.2. Interpersonal skills 1.3. Critical thinking skills 1.4. Observation skills
2. Set OSH work targets	 2.1 Relevant work information is gathered necessary to determine OSH work targets 2.2 OSH Indicators based on gathered information are agreed upon to measure effectiveness of workplace OSH policies and procedures 	 2.1 OSH work targets 2.2 OSH Indicators 2.3 OSH work instructions 2.4 Safety and health requirements of tasks 2.5 Workplace guidelines on providing feedback on OSH and security concerns 2.6 OSH regulations Hazard control procedures 	 2.1 Communication skills 2.2 Collaborating skills 2.3 Critical thinking skills 2.4 Observation skills

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 2.3 Agreed OSH indicators are endorsed for approval from appropriate personnel 2.4 OSH work instructions are received in accordance with workplace policies and procedures* 	2.7 OSH trainings relevant to work	
3. Evaluate effectiveness of Occupational Safety and Health work instructions	 3.1 OSH Practices are observed based on workplace standards 3.2 Observed OSH practices are measured against approved OSH metrics 3.3 Findings regarding effectiveness are assessed and gaps identified are implemented based on 3.4 OSH work standards 	 3.1 OSH Practices 3.2 OSH metrics 3.3 OSH Evaluation Techniques 3.4 OSH work standards 	3.1 Critical thinking skills3.2 Evaluating skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Work Practices Issues	 May include: 1.1 Workers' experience/observance on presence of work hazards 1.2 Unsafe/unhealthy administrative arrangements (prolonged work hours, no break-time, constant overtime, scheduling of tasks) 1.3 Reasons for compliance/non-compliance to use of PPEs or other OSH procedures/policies/ guidelines
2. OSH Indicators	 May include: 2.1 Increased of incidents of accidents, injuries 2.2 Increased occurrence of sickness or health complaints/symptoms 2.3 Common complaints of workers' related to OSH 2.4 High absenteeism for work-related reasons
3. OSH Work Instructions	 May include: 3.1 Preventive and control measures, and targets 3.2 Eliminate the hazard (i.e., get rid of the dangerous machine 3.3 Isolate the hazard (i.e. keep the machine in a closed room and operate it remotely; barricade an unsafe area off) 3.4 Substitute the hazard with a safer alternative (i.e., replace the machine with a safer one) 3.5 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) 3.6 Use engineering controls to reduce the risk (i.e. use safety guards to machine) 3.7 Use personal protective equipment 3.8 Safety, Health and Work Environment Evaluation 3.9 Periodic and/or special medical examinations of workers
4. OSH metrics	May include: 4.1 Statistics on incidence of accidence and injuries 4.2 Morbidity (Type and Number of Sickness) 4.3 Mortality (Cause and Number of Deaths) 4.4 Accident Rate

1. Critical aspects of	Assessment requires evidence that the candidate:	
Competency	1.1. Identify OSH work practices issues relevant to work requirements	
	1.2. Identify gaps in work practices related to relevant OSH work standards	
	1.3. Agree upon OSH Indicators based on gathered information to measure effectiveness of workplace OSH policies and procedures	
	1.4. Receive OSH work instructions in accordance with workplace policies and procedures	
	1.5. Compare Observed OSH practices with against approved OSH work instructions	
	1.6. Assess findings regarding effectiveness based on OSH work standards	
2. Resource Implications	The following resources should be provided:	
	2.1 Facilities, materials, tools and equipment necessary for the activity	
3. Methods of	Competency in this unit may be assessed through:	
Assessment	3.1 Observation/Demonstration with oral questioning	
	3.2 Third party report	
	3.3 Written exam	
4. Context for Assessment	4.1 Competency may be assessed in the work place or in a simulated work place setting	

UNIT OF COMPETENCY

: EVALUATE OCCUPATIONAL SAFETY AND HEALTH WORK PRACTICES

UNIT CODE : 400311326

UNIT DESCRIPTOR

: This unit covers the knowledge, skills and attitude to interpret environmental Issues, establish targets to evaluate environmental practices and evaluate effectiveness of environmental practices

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
 Interpret environmental practices, policies and procedures 	 1.1 Environmental work practices issues are identified relevant to work requirements 1.2 Environmental Standards and Procedures nature of work are determined based on Applicability to nature of work 1.3 Gaps in work practices related to Environmental Standards and Procedures are identified 	 1.1 Environmental Issues 1.2 Environmental Work Procedures 1.3 Environmental Laws 1.4 Environmental Hazardous and Non-Hazardous Materials 1.5 Environmental required license, registration or certification 	 1.1. Analyzing Environmental Issues and Concerns 1.2. Critical thinking 1.3. Problem Solving 1.4. Observation Skills
2. Establish targets to evaluate environmental practices	 2.1 Relevant information is gathered necessary to determine environmental work targets 2.2 Environmental Indicators based on gathered information are set to measure environmental work targets 2.3 Indicators are verified with 	 2.1 Environmental indicators 2.2 Relevant Environment Personnel or expert 2.3 Relevant Environmental 2.4 Trainings and Seminars 	 2.1 Investigative Skills 2.2 Critical thinking 2.3 Problem Solving 2.4 Observation Skills

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	appropriate personnel		
3. Evaluate effectiveness of environmental practices	 3.1 Work environmental practices are recorded based on workplace standards 3.2 Recorded work environmental practices are compared against planned indicators 3.3 Findings regarding effectiveness are assessed and gaps identified are implemented based on environment work standards and procedures 3.4 Results of environmental assessment are conveyed to appropriate personnel 	 3.1 Environmental Practices 3.2 Environmental Standards and Procedures 	3.1 Documentation and Record 3.2 Keeping Skills 3.3 Critical thinking 3.4 Problem Solving 3.5 Observation Skills

VARIABLE	R A N G E
1. Environmental Practices	May include:
Issues	1.1 Water Quality
	1.2 National and Local Government Issues
	1.3 Safety
	1.4 Endangered Species
	1.5 Noise
	1.6 Air Quality
	1.7 Historic
	1.8 Waste
	1.9 Cultural
2. Environmental Indicators	May include:
	2.1 Noise level
	2.2 Lighting (Lumens)
	2.3 Air Quality - Toxicity
	2.4 Thermal Comfort
	2.5 Vibration
	2.6 Radiation
	2.7 Quantity of the Resources
	2.8 Volume

1. Critical aspects of	Asse	essment requires evidence that the candidate:
Competency	1.1.	Identified environmental issues relevant to work
		requirements
	1.2.	Identified gaps in work practices related to
		Environmental Standards and Procedures
	1.3.	Gathered relevant information necessary to
		determine environmental work targets
	1.4.	Set environmental indicators based on gathered
		information to measure environmental work
		targets
	1.5.	Recorded work environmental practices are
		recorded based on workplace standards
	1.6.	Conveyed results of environmental assessment
		to appropriate personnel
2. Resource Implications	The f	following resources should be provided:
	2.1	Workplace/Assessment location
	2.2	Legislation, policies, procedures, protocols and
		local ordinances relating to environmental
		protection
	2.3	Case studies/scenarios relating to environmental
		protection
3. Methods of Assessment		petency in this unit may be assessed through:
	3.1	Written/ Oral Examination
	3.2	Interview/Third Party Reports
	3.3	Portfolio (citations/awards from GOs and NGOs,
		certificate of training – local and abroad)
	3.4	Simulations and role-plays
4. Context for Assessment	4.1	Competency may be assessed in actual
		workplace or at the designated TESDA center.

UNIT OF COMPETENCY

: FACILITATE ENTREPRENEURIAL SKILLS FOR MICRO-SMALL-MEDIUM ENTERPRISES (MSMEs)

UNIT CODE : 400311327

UNIT DESCRIPTOR

: This unit covers the outcomes required to build, operate and grow a micro/small-scale enterprise.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Develop and maintain micro- small medium enterprise (MSMEs) skills in the organization	 1.1 Appropriate <i>business</i> <i>strategies</i> are determined and set for the enterprise based on current and emerging business environment. 1.2 <i>Business</i> <i>operations</i> are monitored and controlled following established procedures. 1.3 Quality assurance measures are implemented consistently. 1.4 Good relations are maintained with staff/workers. 1.5 Policies and procedures on occupational safety and health and environmental concerns are constantly observed. 	 1.1 Business models and strategies 1.2 Types and categories of businesses 1.3 Business operation 1.4 Basic Bookkeeping 1.5 Business internal controls 1.6 Basic quality control and assurance concepts 1.7 Government and regulatory processes 	 1.1 Basic bookkeeping/ accounting skills 1.2 Communication skills 1.3 Building relations with customer and employees 1.4 Building competitive advantage of the enterprise

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Establish and maintain client- base/ market	 2.1 Good customer relations are maintained 2.2 New customers and markets are identified, explored and reached out to. 2.3 Promotions / Incentives are offered to loyal customers 2.4 Additional products and services are evaluated and tried where feasible. 2.5 Promotional / advertising initiatives are carried out where necessary and feasible. 	 2.1 Public relations concepts 2.2 Basic product promotion strategies 2.3 Basic market and feasibility studies 2.4 Basic business ethics 	 2.1 Building customer relations 2.2 Individual marketing skills 2.3 Using basic advertising (posters/ tarpaulins, flyers, social media, etc.)
3. Apply budgeting and financial management skills	 3.1 Enterprise is built up and sustained through judicious control of cash flows. 3.2 Profitability of enterprise is ensured though appropriate <i>internal controls.</i> 3.3 Unnecessary or lower-priority expenses and purchases are avoided. 	 3.1 Cash flow management 3.2 Basic financial management 3.3 Basic financial accounting Business internal controls 	 3.1 Setting business priorities and strategies 3.2 Interpreting basic financial statements 3.3 Preparing business plans

VARIABLE	RANGE	
1. Business strategies	May include:	
	1.1. Developing/Maintaining niche market	
	1.2. Use of organic/healthy ingredients	
	1.3. Environment-friendly and sustainable practices	
	1.4. Offering both affordable and high-quality products and services	
	1.5. Promotion and marketing strategies (e. g., online marketing)	
2. Business operations	May include:	
	2.1 Purchasing	
	2.2 Accounting/Administrative work	
	2.3 Production/Operations/Sales	
3. Internal controls	May include:	
	3.1 Accounting systems	
	3.2 Financial statements/reports	
	3.3 Cash management	
4. Promotional/ Advertising	May include:	
initiatives	4.1 Use of tarpaulins, brochures, and/or flyers	
	4.2 Sales, discounts and easy payment terms	
	4.3 Use of social media/Internet	
	4.4 "Service with a smile"	
	4.5 Extra attention to regular customers	

1. Critical aspects of competency	 Assessment requires evidence that the candidate: 1.1 Demonstrated basic entrepreneurial skills 1.2 Demonstrated ability to conceptualize and plan a micro/small enterprise 1.3 Demonstrated ability to manage/operate a micro/small-scale business
2. Resource Implications	 The following resources should be provided: 2.1 Simulated or actual workplace 2.2 Tools, materials and supplies needed to demonstrate the required tasks 2.3 References and manuals
3. Methods of Assessment	Competency in this unit may be assessed through : 3.1 Written examination 3.2 Demonstration/observation with oral questioning 3.3 Portfolio assessment with interview 3.4 Case problems

4. Context of	4.1 Competency may be assessed in workplace or in a
Assessment	simulated workplace setting
	4.2 Assessment shall be observed while tasks are being
	undertaken whether individually or in-group

COMMON COMPETENCIES

- UNIT TITLE : USE HAND TOOLS
- UNIT CODE : ELC311205
- **UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes on the safe use, handling and maintenance of tools.

	ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1.	Plan and prepare for tasks to be undertaken	 1.1. Tasks to be undertaken are properly identified 1.2. Appropriate <i>hand</i> <i>tools</i> are identified and selected according to the task requirements 	 Planning and preparing task/activity Electronics hand tools and their uses Function, operation and common faults in electronics hand tools 	 Preparing required tasks Communication skills Using hand tools properly
2.	Prepare hand tools	 2.1. Appropriate hand tools are checked for proper operation and safety 2.2. Unsafe or faulty tools are identified and marked for repair according to standard company procedure 	 Checking and safety requirements in handling tools Standard procedures in checking, identification and marking of safe or unsafe/ faulty tools 	 Identifying and checking hand tools Marking of safe or unsafe/ faulty hand tools
3.	Use appropriate hand tools and test equipment	 3.1 Tools are used according to tasks undertaken 3.2 All safety procedures in using tools are observed at all times and appropriate <i>personal protective equipment</i> (PPE) are used 	 Safety requirements in using electronics hand tools and test equipment Electronics hand tools for adjusting, dismantling, assembling, finishing, and cutting. Processes, Operations, Systems 	 Reading skills required to interpret work instruction and numerical skills Using PPE properly Problem solving in emergency situation

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.3 Malfunctions, unplanned or unusual events are reported to the supervisor	 Proper usage and care of hand tools Types and uses of test equipment Common faults in the use of hand tools 	
4. Maintain hand tools	 4.1 Tools are not dropped to avoid damage 4.2 Routine <i>maintenance</i> of tools undertaken according to standard operational procedures, principles and techniques 4.3 Tools are stored safely in appropriate locations in accordance with manufacturer's specifications or standard operating procedures 	 Safety requirements in maintenance of hand tools Processes, Operations, Systems Maintenance of tools Storage of hand tools 	Checking and cleaning hand tools Storing hand tools properly

	VARIABLE	RANGE
1.	Hand tools	Hand tools for adjusting, dismantling, assembling, finishing, and cutting. Tool set includes the following but not limited to: screw drivers, pliers, punches, wrenches, files
2.	Personal Protective Equipment (PPE)	2.1. Gloves2.2. Protective eyewear2.3. Apron/overall
3.	Maintenance	 3.1. Cleaning 3.2. Lubricating 3.3. Tightening 3.4. Simple tool repairs 3.5. Hand sharpening 3.6. Adjustment using correct procedures

1. Critical aspect of competency	 Assessment requires evidence that the candidate: 1.1. Demonstrated safe working practices at all times 1.2. Communicated information about processes, events or tasks being undertaken to ensure a safe and efficient working environment 1.3. Planned tasks in all situations and reviewed task requirements as appropriate 1.4. Performed all tasks to specification 1.5. Maintained and stored tools in appropriate location
2. Method of assessment	Competency in this unit must be assessed through: 2.1. Observation 2.2. Oral questioning
3. Resource Implication	Tools may include the following but not limited to: 3.1 screw drivers 3.2 pliers 3.3 punches 3.4 wrenches, files
4. Context of Assessment	Assessment may be conducted in the workplace or in a simulated work environment

UNIT TITLE : APPLY QUALITY STANDARDS

- UNIT CODE : ELC311204
- **UNIT DESCRIPTOR** : This unit covers the knowledge, skills, (and) attitudes and values needed to apply quality standards in the workplace. The unit also includes the application of relevant safety procedures and regulations, organization procedures and customer requirements

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
 Assess quality of received materials or components 	 1.1. Work instructions are obtained and work is carried out in accordance with standard operating procedures 1.2. Received materials or component parts are checked against workplace standards and specifications 1.3. Faulty material or components related to work are identified and isolated 1.4. Faults and any identified causes are recorded and/or reported to the supervisor concerned in accordance with workplace procedures 1.5. Faulty materials or components are replaced in accordance with workplace procedures 	 Relevant production processes, materials and products Characteristics of materials, software and hardware used in production processes Quality checking procedures Quality Workplace procedures Identification of faulty materials related to work 	 Reading skills required to interpret work instruction Critical thinking Interpreting work instructions

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Assess own work	 2.1. Documentation relative to quality within the company is identified and used 2.2. Completed work is checked against workplace standards relevant to the task undertaken 2.3. Faulty pieces are identified and isolated 2.4. Information on the quality and other indicators of production performance is recorded in accordance with workplace procedures In cases of deviations from specified quality standards, causes are documented and reported in accordance with the workplace' standards operating procedures 	 Safety and environmental aspects of production processes Fault identification and reporting Workplace procedure in documenting completed work Workplace Quality Indicators 	 Carry out work in accordance with OHS policies and procedures
3. Engage in quality improvement	 3.1 Process improvement procedures are participated in relation to workplace assignment 3.2 Work is carried out in accordance with process improvement procedures 3.3 Performance of operation or 	 Quality improvement processes Company customers defined 	 Solution providing and decision- making Practice company process improvement procedure

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	quality of product or service to ensure <i>customer</i> satisfaction is monitored		

VARIABLE	RANGE
1. Materials/components	 1.1. Materials may include but not limited to: 1.1.1. wires 1.1.2. cables, soldering lead 1.1.3. electrical tape 1.2. Components may include but not limited to: 1.2.1. ICs 1.2.2. Diodes
2. Faults	 Faults may include but not limited to: 2.1. Components/materials not according to specification 2.2. Components/materials contain manufacturing defects 2.3. Components/materials do not conform with government regulation i.e., PEC, environmental code 2.4. Components/materials have safety defect
3. Documentation	3.1. Organization work procedures3.2. Manufacturer's instruction manual3.3. Customer requirements3.4. Forms
4. Quality standards	 4.1.Quality standards may relate but not limited to the following: 4.1.1. materials 4.1.2. component parts 4.1.3. final product 4.1.4. production processes
5. Customer	5.1. Co-worker5.2. Supplier5.3. Client5.4. Organization receiving the product or service

1. Critical aspect of competency	 Assessment must show that the candidate: 1.1. Carried out work in accordance with the company's standard operating procedures 1.2. Performed task according to specifications 1.3. Reported defects detected in accordance with standard operating procedures 1.4. Carried out work in accordance with the process improvement procedures
2. Method of assessment	 2.1. The assessor may select two (2) of the following assessment methods to objectively assess the candidate: 2.1.1. Observation 2.1.2. Questioning 2.1.3. Practical demonstration
3. Resource implication	Materials and component parts and equipment to be use in a real or simulated electronic production situation
4. Context of Assessment	Assessment may be conducted in the workplace or in a simulated environment.

UNIT TITLE : PERFORM COMPUTER OPERATIONS

UNIT CODE : ELC311203

UNIT DESCRIPTOR : This unit covers the knowledge, skills, (and) attitudes and values needed to perform computer operations which include inputting, accessing, producing and transferring data using the appropriate hardware and software

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Plan and prepare for task to be undertaken	 1.1. Requirements of task are determined in accordance with the required output. 1.2. Appropriate <i>hardware</i> and <i>software</i> are selected according to task assigned and required outcome. 1.3. Task is planned to ensure that <i>OH & S guidelines</i> and procedures are followed. 1.4. Client -specific guidelines and procedures are followed. 1.5. Required data security guidelines are applied in accordance with existing procedures. 	 Main types of computers and basic features of different operating systems Main parts of a computer Information on hardware and software Data security guidelines 	 Reading and comprehension skills required to interpret work instruction and to interpret basic user manuals. Communication skills to identify lines of communication, request advice, follow instructions and receive feedback. Interpreting user manuals and security guidelines
2. Input data into computer	 2.1 Data are entered into the computer using appropriate program/application in accordance with company procedures 2.2 Accuracy of information is checked and information is 	 Basic ergonomics of keyboard and computer user Storage devices and basic categories of memory Relevant types of software 	 Technology skills to use equipment safely including keyboard skills. Entering data

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 saved in accordance with standard operating procedures 2.3 Inputted data are stored in <i>storage media</i> according to requirements 2.4 Work is performed within <i>ergonomic guidelines</i> 		
3. Access information using computer	 3.1 Correct program/ application is selected based on job requirements 3.2 Program/application containing the information required is accessed according to company procedures 3.3 <i>Desktop icons</i> are correctly selected, opened and closed for navigation purposes 3.4 Keyboard techniques are carried out in line with OH & S requirements for safe use of keyboards 	 General security, privacy legislation and copyright Productivity Application Business Application 	 Accessing information Searching and browsing files and data
4. Produce/ output data using computer system	 4.1 Entered data are processed using appropriate software commands 4.2 Data printed out as required using computer hardware/peripheral devices in accordance with standard operating procedures 4.3 Files, data are transferred between 	 Computer application in printing, scanning and sending facsimile Types and function of computer peripheral devices 	 Computer data processing Printing of data Transferring files and data

ELEMENT	. It	PERFORMANCE CRITERIA alicized terms are elaborated in the ange of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		compatible systems using computer software, hardware/ peripheral devices in accordance with standard operating procedures		
5. Maintain computer equipment systems	and	Systems for cleaning, minor <i>maintenance</i> and replacement of consumables are implemented Procedures for ensuring security of data, including regular back-ups and virus checks are implemented in accordance with standard operating procedures Basic file maintenance procedures are implemented in line with the standard operating procedures	 Computer equipment/system basic maintenance procedures Viruses OH & S principles and responsibilities Calculating computer capacity System Software Basic file maintenance procedures 	 Removing computer viruses from infected machines Making backup files

VARIABLE	RANGE
1. Hardware and peripheral devices	 1.1. Personal computers 1.2. Networked systems 1.3. Communication equipment 1.4. Printers 1.5. Scanners 1.6. Keyboard 1.7. Mouse 1.8. Voice/Data logger
2. Software	Software includes the following but not limited to: 2.1. Word processing packages 2.2. Data base packages 2.3. Internet 2.4. Spreadsheets 2.5. Client Specific Software
3. OH & S guidelines	3.1. OHS guidelines3.2. Enterprise procedures
4. Storage media	Storage media include the following but not limited to: 4.1. USBs 4.2. CDs 4.3. External disk drives 4.4. hard disk drives, local and remote 4.5. optical drives 4.6. cloud storage
5. Ergonomic guidelines	 5.1. Types of equipment used 5.2. Appropriate furniture 5.3. Seating posture 5.4. Lifting posture 5.5. Visual display unit screen brightness
6. Desktop icons	Icons include the following but not limited to: 6.1. directories/folders 6.2. files 6.3. network devices 6.4. recycle bin 6.5. program icons
7. Maintenance	 7.1. Creating and managing more space in the hard disk and other peripherals 7.2. Reviewing programs 7.3. Deleting unwanted files 7.4. Backing up files 7.5. Checking hard drive for errors 7.6. Using up to date anti-virus programs 7.7. Cleaning dust from internal and external surfaces

1 Critical concet of	Accomment requires ovidence that the condidate:
1. Critical aspect of	Assessment requires evidence that the candidate:
competency	1.1. Selected and used hardware components correctly
	and according to the task requirement
	1.2. Identified and explain the functions of both hardware
	and software used, their general features and
	capabilities
	•
	1.3. Produced accurate and complete data in accordance with the requirements
	1.4. Used appropriate devices and procedures to transfer
	files/data accurately
	1.5. Maintained computer system in line with the
	standard operating procedures
	standard operating procedures
2. Method of assessment	2.1 The assessor may select two of the following
	2.1. The assessor may select two of the following
	assessment methods to objectively assess the
	candidate:
	2.1.1. Observation with oral questioning
	2.1.2. Practical demonstration
3. Resource implication	3.1. Computer hardware with peripherals
	3.2. Appropriate software
1 Contaxt of Accordant	According to a conducted in the workplace or in a
4. Context of Assessment	Assessment may be conducted in the workplace or in a
	simulated work environment

CORE COMPETENCIES

UNIT OF COMPETENCY	: DO STRIP LOADING
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UNIT CODE : CS-

UNIT DESCRIPTOR

: This unit covers the knowledge, skills and attitudes required to apply best practice in preparation for material loading to loading of strips which involves ensuring efficiency, quality, safety, and compliance with industry.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare for material loading	 1.1 Wearing of <i>PPEs</i> and <i>ESD control materials</i> are applied following Electrostatic Discharge. 1.2 Housekeeping requirements are performed every start of the shift. 1.3 Strips for deflash are taken from the designated rack. 1.4 Scoops of pure plastic media are received from the Material Handler. 1.5 <i>Lot details</i> are checked if it tallies with tray number and actual quantity. 1.6 <i>Machine parameters</i> and preventive maintenance sticker attached on the machine are checked following process requirements. 1.7 <i>Machine parts</i> are monitored following process requirements. 1.8 <i>Control plan requirements</i> and 	SCIENCE 1.1 Electrostatic Discharge (ESD) 1.2 Relative humidity & Room temperature TECHNOLOGY 1.3 Deflash machine MATHEMATICS 1.4 Basic arithmetic COMMUNICATION 1.5 Work instruction 1.6 External visual criteria 1.7 Assembly diagram 1.8 Traveler's card 1.9 PM sticker 1.10 Control plan ENVIRONMENT RELATED LAWS AND ORDINANCES 1.11 PPEs 1.12 6s 1.13 Waste segregation 1.14 Occupational Safety and Health Standards (OSHAS) (e.g. chemical handling, knowledge on Material Safety Data Sheets (MSDS)	 1.1 Basic communication skills 1.2 Basic computation 1.3 Application of PPEs 1.4 Documentation skills 1.5 Operations skills

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Load strips	 other documents are checked following process requirements. 1.9 Dummy strips are prepared for machine set up following process requirements. 2.1 Scoops of pure plastic media are loaded in the slot of the machine. 	SCIENCE 2.1 Electrostatic Discharge (ESD)	2.1 Basic Communication Skills
	 2.2 Dummy strips are loaded to check machine set up and product output in accordance with process requirements. 2.3 Molded strips are loaded on the machine one by one following process requirements. 2.4 Visual inspection of deflashed strips are conducted every start and middle of the traveler's card in accordance with process requirements. 2.5 Loaded strips are monitored following process requirements. 2.6 Machine functionality is observed during the process following process requirements. 2.7 Recording and reporting is performed following process requirements. 	 2.2 Relative Humidity & Room Temperature TECHNOLOGY 2.3 Low powered microscope 2.4 Luxo Lamp MATHEMATICS 2.5 Basic Arithmetic COMMUNICATION 2.6 Work instruction 2.7 External visual criteria 2.8 Assembly diagram 2.9 Traveler's card 2.10 PM sticker 2.11 Control plan 2.12 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 2.13 PPEs 2.14 6s 2.15 Waste segregation 	 2.2 Basic Computation Skills 2.3 Recording and reporting skills 2.4 Documentation skills 2.5 Operations skills 2.6 Attention to details
3. Conduct post material loading	3.1 6s is applied following good housekeeping practices	MATHEMATICS 3.1 Basic arithmetic COMMUNICATION	 3.1 Documentation skills 3.2 Communication skills 3.3 6s

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 3.2 Wastes are segregated following solid waste management system 3.3 Record keeping is performed following process requirements 	 3.2 Reporting techniques and documentation practices ENVIRONMENT RELATED LAWS AND ORDINANCES 3.3 6s 3.4 Occupational Safety and Health Standards (OSAHS) 	3.4 Soring and managing wastes3.5 Record keeping

	VARIABLE	RANGE
1.	PPEs	May include: 1.1 Respirator mask 1.2 Gloves 1.3 Goggles 1.4 Earplug
2.	ESD control materials	May include: 2.1 Smock, headcap, facemask, slippers Note: Customized per industry 2.2 Wrist strap 2.3 Finger cots
3.	Lot details	May include: 3.1 Quantity 3.2 Device/Package type 3.3 Strip code 3.4 Tray number 3.5 Special instructions 3.6 Customer
4.	Machine parameter requirement	May include: 4.1 Blasting pressure 4.2 Blow-off pressure 4.3 Belt speed 4.4 Main CDA pressure supply
5.	Machine parts	May include: 5.1 Belt 5.2 Nozzle 5.3 Nozzle tip 5.4 Plastic media level
6.	Control plan requirements	May include: 6.1 Process tolerance 6.2 Evaluation measurement technique 6.3 Sample size and frequency 6.4 Machine/tools/jigs

1. Critical aspects of Competency	 Assessment requires evidence that the candidate: 1.1 Prepared for material loading 1.2 Loaded strips 1.3 Conducted post material loading
2. Resource implications	The following resources should be provided: 2.1 Manpower 2.2 Raw materials 2.3 Spare parts 2.4 Work Instruction 2.5 Recording sheet 2.6 PPEs 2.7 Machines 2.8 Facilities
3. Methods of Assessment	Competency in this unit must be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context for Assessment	4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : DO STRIP UNLOADING

- UNIT CODE : CS-
- UNIT DESCRIPTOR
 This unit covers the competencies required to unload strips in the deflashing process. It includes loading plastic media and molded strips, conducting visual inspections, monitoring machine functionality, and handling deflashed strips. This unit ensures following correct procedures, quality based on visual criteria, record and report accurately, and maintain a clean work environment.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Unloading of strips	 1.1 Strips are unloaded on the machine following process requirements. 1.2 Visual appearance of sample deflashed strips are checked using inspection instruments. 1.3 Appearance of deflashed strips are checked based on <i>External Visual</i> <i>Criteria</i>. 1.4 Deflashed strips are quantified, arranged in the metal trays and transferred in the designated rack following process requirement 	 TECHNOLOGY 1.1 Deflashing machine 1.2 Low power microscope MATHEMATICS 1.3 Basic Arithmetic 1.4 COMMUNICATION 2.1 Work instruction 2.2 External visual criteria 2.3 Assembly diagram 2.4 Traveler's card 2.5 PM sticker 2.6 Control plan 2.7 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 2.8 6s 2.9 OSAHS 	 2.1 Handling materials 2.2 Counting and recording number of strips 2.3 Communication skills 2.4 Identifying visual defects in deflashed strips
2. Post unloading activities	 2.1 Recording is performed. 2.2 Reporting is done. 2.3 6s is applied following good housekeeping. 2.4 Wastes are segregated following a solid waste management system. 	MATHEMATICS 3.1 Basic arithmetic COMMUNICATION 3.2 Reporting techniques and documentation practices ENVIRONMENTAL RELATED LAWS AND ORDINANCES 3.3 6s	 3.1 Documentation skills 3.2 Communication skills 3.3 Sorting and managing wastes

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		3.4 OSAHS	

VARIABLE	RANGE
1. External visual criteria	May include: 1.1 Scratches 1.2 Blasting Mark 1.3 Crumpled 1.4 Chip out
	1.5 Excess Mold Flash

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Unloaded of strips 1.2 Post unloading activities
2. Resource implications	The following resources should be provided: 2.1 Manpower 2.2 Raw materials 2.3 Spare parts 2.4 Instruction manual 2.5 Recording sheet 2.6 PPEs 2.7 Machines 2.8 Facilities
3. Methods of Assessment	Competency in this unit must be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context for Assessment	4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : PERFORM PROCESS AND PRODUCT MONITORING

UNIT CODE : CS-

UNIT DESCRIPTOR : This unit covers the skills and knowledge required to effectively monitor production processes in the deflashing operation. It involves overseeing the operation of machinery and equipment, identifying deviations from standards, and ensuring that production meets quality requirements. Key responsibilities include observing process parameters, detecting and reporting irregularities, and implementing corrective actions to maintain optimal performance.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Perform deflash monitoring	 1.1 <i>Machine parameters</i> and set up are observed following process requirements. 1.2 Deflashing process is monitored in accordance with process requirements. 1.3 Visually inspect the deflashed strips every start and middle of the lot for monitoring and according to <i>Deflashing External</i> <i>Visual Criteria</i>. 1.4 Recording and Reporting is performed. 	 TECHNOLOGY 2.1 Deflashing machines 2.2 Low power microscope MATHEMATICS 2.3 Basic Arithmetic COMMUNICATION 2.4 Process Traveler 2.5 Customer documents 2.6 Work instruction 2.7 External visual criteria 2.8 Assembly diagram 2.9 Traveler's card 2.10 PM sticker 2.11 Control plan 2.12 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 2.13 6s 2.14 ACCO 	 2.1 Monitoring skills 2.2 Adjusting machine parameters 2.3 Conducting visual inspections of deflashed strips to detect quality issues 2.4 Recording and reporting of deflashing process data
2. Perform post deflash monitoring	 2.1 6s is applied following good housekeeping. 2.2 Wastes are segregated following a solid waste management system. 2.3 Reporting is performed. 	COMMUNICATION 3.1 Reporting techniques and documentation practices	 3.1 Documentation skills 3.2 Communication skills 3.3 Sorting and managing wastes

VARIABLE	RANGE	
 Deflashing external visual criteria 	May include: 1.1 scratches 1.2 blasting mark 1.3 crumpled 1.4 chip out	
2. Machine parameter requirements	May include:2.1Blasting pressure2.2Blow-off pressure2.3Belt speed2.4Main CDA pressure supply	

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Performed deflash monitoring 1.2 Performed post deflash monitoring
2. Resource implications	The following resources should be provided: 2.1 Manpower 2.2 Raw materials 2.3 Spare parts 2.4 Work Instruction 2.5 Recording sheet 2.6 PPEs 2.7 Machines 2.8 Facilities
3. Methods of Assessment	Competency in this unit must be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context for Assessment	4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : ANALYZING FOREIGN MATTER

UNIT CODE : CS-

UNIT DESCRIPTOR
 This unit covers the skills and knowledge required to identify, assess, and manage foreign matter in the deflashing process. It includes understanding the sources of contaminants, the impact on product quality, and the methods for detection and removal to ensure adherence to production standards and safety protocols.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
 Analyzing foreign matter on deflashed strips 	 2.1 <i>Foreign matter</i> on deflashed strips is analyzed visually on the samples. 2.2 Recording and Reporting is performed according to process requirements. 	 TECHNOLOGY 2.1 Deflashing machines 2.2 Low power microscope MATHEMATICS 2.3 Basic Arithmetic COMMUNICATION 2.4 Work instruction 2.5 External visual criteria 2.6 Assembly diagram 2.7 Traveler's card 2.8 PM sticker 2.9 Control plan 2.10 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 2.11 6s 2.12 OSAHS 	 1.1 Inspection skills 1.2 Identifying defects or non- conformities based on external visual criteria 1.3 Reporting findings and issues to relevant personnel 1.4 Attention to details
2. Perform post analysis of foreign matter activities	 3.1 6s is applied following good housekeeping. 3.2 Wastes are segregated following a solid waste management system. 3.3 Record keeping is performed following process requirements. 	COMMUNICATION 1.1 Record keeping ENVIRONMENTAL RELATED LAWS AND ORDINANCE 1.2 6s 1.3 OSAHS	 3.1 Documentation skills 3.2 Communication skills 3.3 Sorting and managing wastes 3.4 Applying 6s

VARIABLE	RANGE
1. Foreign Matter	May include: 1.1 Broken Down Media Particles 1.2 Oil/Lubricants 1.3 Metallic Particles 1.4 Dust/Airborne Particles 1.5 Fibers from Wipes/Clothing

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Analyzed foreign matter on deflashed strips 1.2 Performed post analysis of foreign matter activities
2. Resource Implications	The following resources should be provided: 2.1 Manpower 2.2 Raw materials 2.3 Spare parts 2.4 Instruction manual 2.5 Recording sheet 2.6 PPEs 2.7 Machine 2.8 Facilities
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : ACTIVATE DEFLASH MACHINE TO PRODUCTION MODE

- UNIT CODE : CS-
- UNIT DESCRIPTOR
 This unit covers the skills and knowledge required to prepare and activate a deflash machine for production. It includes understanding machine specifications, performing preoperational checks, setting up the machine according to production requirements, and ensuring safe and efficient operation. The unit is essential for production operators responsible for maintaining quality and productivity in the deflashing process.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare deflash machine	 1.1 Machine parameters and set up are checked based on control plan and work instructions. 1.2 Recording is performed following process requirements. 	TECHNOLOGY 1.1 Deflashing machine MATHEMATICS 1.2 Basic Arithmetic COMMUNICATION 1.3 Work instruction 1.4 External visual criteria 1.5 Assembly diagram 1.6 Traveler's card 1.7 PM sticker 1.8 Control plan 1.9 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 1.10 6s 1.11 OSAHS	1.1 Operating deflashing machine1.2 Recording skills1.3 Operation skills
2. Activate deflash machine	 2.1 Activation of machine to production mode is done following process requirements. 2.2 Functionality of the machine is observed and monitored following process requirements. 	TECHNOLOGY 2.1 Deflashing machine MATHEMATICS 2.2 Basic Arithmetic COMMUNICATION 2.3 Work instruction 2.4 External visual criteria 2.5 Assembly diagram 2.6 Traveler's card 2.7 PM sticker	2.1 Inspection skills2.2 Identifying defects2.3 Attention to details2.4 Operation skills2.5 Recording and reporting skills

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 2.3 Dummy units are used to check machine functionality following process requirements. 2.4 Recording and reporting is performed following process requirements. 	 2.8 Control plan 2.9 Log sheet ENVIRONMENTAL RELATED LAWS AND ORDINANCES 2.10 6s 2.11 OSAHS 	
3. Conduct post activation activities	 3.1 6s is applied following good housekeeping. 3.2 Wastes are segregated following a solid waste management system. 3.3 Record keeping is performed following process requirements. 	MATHEMATICS 3.1 Basic arithmetic COMMUNICATION 3.2 Record keeping ENVIRONMENTAL RELATED LAWS AND ORDINANCE 3.3 6s 3.4 OSAHS	 3.1 Documentation skills 3.2 Communication skills 3.3 Sorting and managing wastes 3.4 Applying 6s

RANGE OF VARIABLES

VARIABLE	RANGE
1. 6s	May include: 1.1 Sort 1.2 Set in Order 1.3 Shine 1.4 Standardize 1.5 Sustain 1.6 Safety 1.7 Spirit

EVIDENCE GUIDE

1. Critical Aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Prepared deflash machine
	1.2 Activated deflash machine
	1.3 Conducted post activation activities
2. Resource	The following resources should be provided:
Implications	2.1 Manpower
	2.2 Raw materials
	2.3 Spare parts
	2.4 Work instructions
	2.5 Recording sheet
	2.6 PPEs
	2.7 Machines
	2.8 Facilities
3. Methods of	Competency in this unit may be assessed through:
Assessment	3.1 Written test
	3.2 Demonstration with oral questioning
	3.3 Interview
4. Context of	4.1 Competency may be assessed in the actual workplace
Assessment	or at the designated TESDA Accredited Assessment
	Center.
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UNIT OF COMPETENCY : CHECK REQUIRED MACHINE PARAMETERS

UNIT CODE : CS-

 UNIT DESCRIPTOR
 This unit covers the skills and knowledge required to verify and adjust machine parameters in the deflashing process. It includes checking and setting up the necessary operational settings, ensuring that machines operate within specified parameters, and making adjustments as needed to maintain product quality and process efficiency.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare for machine parameter checking	 1.1 <i>Documents</i> are prepared for machine checking according to process requirements. 1.2 Machine is prepared according to process requirements. 1.3 Dummy strips are prepared for machine set up and parameter checking. 1.4 Recording and reporting is performed following process requirements. 	 TECHNOLOGY 1.1 Deflashing machine MATHEMATICS 1.2 Basic Arithmetic COMMUNICATION 1.3 Work instruction 1.4 External visual criteria 1.5 Assembly diagram 1.6 Traveler's card 1.7 PM sticker 1.8 Control plan 1.9 Log sheet 	 1.1 Preparing and organizing documentation for machine checking 1.2 Setting up and preparing the machine for deflashing process 1.3 Identifying and using appropriate tools and equipment for machine setup
2. Machine parameter checking	 2.1 Machine parameters are checked following process requirements. 2.2 Monitoring of machine parameters is done following process requirements. 2.3 Record and reporting is performed following process requirements. 	 TECHNOLOGY 2.1 Deflashing machine 2.2 Low power microscope MATHEMATICS 2.3 Basic Arithmetic COMMUNICATION 2.4 Work instruction 2.5 Control plan 2.6 External visual criteria 2.7 Traveler's card 2.8 Log sheet 	 2.1 Preparing and organizing documentation for machine checking 2.2 Setting up and preparing the machine for the deflasing process 2.3 Identifying and using appropriate tolls and equipment for machine setup
3. Conduct post parameter checking	3.1 6s is applied following good housekeeping practices.	MATHEMATICS 3.1 Basic arithmetic COMMUNICATION	3.1 Documentation skills3.2 Communication skills

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 3.2 Wastes are segregated following solid waste management system 3.3 Record keeping is performed 3.4 Reporting is performed according to process requirements. 	 3.2 Reporting techniques and documentation practices ENVIRONMENTAL RELATED LAWS AND ORDINANCE 3.3 6s 3.4 OSAHS 	3.3 Sorting and managing wastes

RANGE OF VARIABLES

VARIABLE	RANGE
1. Documents	May include: 1.1 Work instruction 1.2 Control plan 1.3 Assembly bonding diagram
2. Machine parameter requirements	May include: 2.1 Blasting pressure 2.2 Blow-off pressure 2.3 Belt speed 2.4 Main CDA pressure supply

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared for machine parameter checking 1.2 Checked machine parameters 1.3 Conducted post parameter checking
2. Resource Implications	 The following resources should be provided: 2.1 Manpower 2.2 Raw materials 2.3 Spare parts 2.4 Instruction manual 2.5 Recording sheet 2.6 PPEs 2.7 Machines 2.8 Facilities
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : CHECK THE CONTROL PLAN REQUIREMENTS

UNIT CODE : CS-

UNIT DESCRIPTOR
 This unit focuses on equipping production operators with the skills and knowledge necessary to accurately verify and interpret control plan requirements specific to the deflashing process. It covers understanding critical control points, specifications, and procedures to ensure consistent quality and adherence to production standards. The unit emphasizes the importance of following documented control plans to prevent defects and maintain product quality.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare control plan for deflash process	 1.1 Control plan requirements are prepared prior to the deflash process in accordance with process requirements. 1.2 Machine set up is prepared following process requirements. 	TECHNOLOGY 1.1 Deflashing machine MATHEMARICS 1.2 Basic Arithmetic COMMUNICATION 1.3 Control plan 1.4 Work instruction 1.5 Traveler's card 1.6 Logsheet	 1.1 Preparing and organizing documentation for machine checking 1.2 Setting up and preparing the machine for the deflashing process 1.3 Identifying and using appropriate tools and equipment for machine set up
2. Check required control plan	 2.1 Required control plan is checked following process requirements 2.2 Control plan requirements are tallied with Traveler's card and other related documents. 2.3 Recording and reporting is performed following process requirements 	 MATHEMATICS 1.1 Basic Arithmetic COMMUNICATION 1.2 Reporting techniques and documentation practices ENVIRONMENTAL RELATED LAWS AND ORDINANCES 1.3 6s 4 OSAHS 	 2.1 Documentation skills 2.2 Communication skills 2.3 Sorting and managing wastes
3. Conduct post- operation activities	3.1 Wastes are segregated following solid	COMMUNICATION 3.1 Record keeping	3.1 Segregating wastes 3.2 Applying 6s 3.3 Record keeping

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	 waste management system. 3.2 6s is applied following good housekeeping practices. 3.3 Record keeping is performed 	ENVIRONMENTAL RELATED LAWS AND ORDINANCE 3.2 Waste segregation 3.3 6s	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Deflashing details	May include:
	1.1 Traveler's card
	1.2 Molding compound
	1.3 Strip code
	1.4 Quantity
	1.5 Tray number
	1.6 Special instructions
2. Deflashing external	May include:
visual criteria	2.1 No scratches
	2.2 No blasting mark
	2.3 No crumpled
	2.4 no chip out
3. Details of deflashed	May include:
strips	3.1 Device name
	3.2 Lot number
	3.3 Quantity
	3.4 Run number
	3.5 Special instruction

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared control plan for deflash process 1.2 Checked required control plan 1.3 Conducted post checking of control plan
2. Resource Implications	The following resources should be provided:2.1 Manpower2.2 Raw materials2.3 Spare parts2.4 Instruction manual2.5 Recording sheet2.6 PPEs2.7 Machines2.8 Facilities
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written test 3.2 Demonstration with oral questioning 3.3 Interview
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

GLOSSARY OF TERMS			
1.	6S	A systematic approach to workplace organization and standardization, comprising six components that aim to optimize efficiency and safety in the workplace. (Sort, Set in order, shine, standardize, sustain and safety)	
2.	Appearance	It refers to the visual characteristics or attributes of an object, material, or product.	
3.	Assembly Bonding Diagram (ABD)	It is a visual representation used in manufacturing and engineering to show how different components or materials are joined together during the assembly process. It illustrates the locations and methods of bonding or fastening.	
4.	Assembly Drawing	It is a technical illustration used in manufacturing to show how various components of a product fit together.	
5.	Cleanroom Dust Particle Count	it is a critical measurement that indicates the level of cleanliness in the environment	
6.	Control Plan Requirements	It is a critical document in quality management systems, particularly in manufacturing and production. It outlines the methods and procedures used to monitor and control processes to ensure that products meet specified quality standards.	
7.	Cured Lot	A batch of items or materials that has been subjected to a curing process to achieve desired physical or chemical properties. The curing process ensures that the lot meets the required specifications and performance standards.	
8.	Curing Temperature	The temperature at which a material is heated or maintained during the curing process to facilitate chemical reactions or physical changes required for it to reach its final state.	
9.	Customer Documents	It is a type of paperwork and digital files that are associated with customer interactions, transactions, and relationships.	
10.	Customer's Requirements	Are the needs and expectations that customers have for a product, service, or experience. Understanding and addressing these requirements are crucial for businesses to ensure customer satisfaction, loyalty, and overall success.	
11.	Daily Target Plan	it is a no. of target output aim to accomplish within a single day	
12.	Die Attach Machine	It is an automated device used in the semiconductor industry to precisely attach semiconductor dies (chips) to a substrate or lead frame during the manufacturing process of integrated circuits (ICs).	
13.	Die Attach	The process of adhering a semiconductor die to a substrate or lead frame using various bonding materials and techniques.	
14.	Ероху	A type of polymer material created by the reaction of an epoxide (a reactive organic compound) with a hardener or curing agent. The result is a strong, rigid material that cures to form a solid, durable substance.	

15.	Epoxy Label Information	This information is usually found on product labels or data sheets provided by manufacturers and includes details about the epoxy resin, hardeners, and any additives.
16.	ESD	Any material that has properties designed to either dissipate static electricity or prevent the buildup of static charges
17.	Internal Visual Criteria	A set of standards or guidelines used to evaluate the visual aspects of a product or component during quality control or inspection processes.
18.	Log sheet	It is a structured document used to record data, activities, or events systematically over time.
19.	Lot	A distinct group or batch of items produced, handled, or sold as a unit. The term is often used to ensure traceability, manage inventory, and maintain quality standards.
20.	Material Request Form	It is a document used to formally request materials or supplies needed for a project, production process, or other operational needs. It serves as a way to ensure that the necessary materials are ordered and provided in a timely manner, maintaining smooth operations and avoiding disruptions.
21.	OSHS	It refers to the field dedicated to the safety, health and welfare of people engaged in work or employment. It involves the practices, regulations, and policies designed to prevent workplace accidents, injuries and illness ensuring a safe and healthy working environment.
22.	Oven Curing	A thermal process where materials are heated in an oven to promote chemical reactions or physical changes that lead to hardening, setting, or bonding.
23.	Parameter	A measurable or definable factor that affects or determines the behavior, performance, or outcome of a system, process, or function.
24.	Preventive Maintenance Sticker	It refers to a Preventice Machine Sticker. This sticker is used in various industries to indicate that equipment or machinery has undergone scheduled preventive machine and to provide important information about the machine process.
25.	Raw Materials	are the basic substances or components used in manufacturing processes to produce finished goods or products.
26.	Report	It is a structured document that presents information, findings, or data on a specific subject or activity. Reports are used to communicate detailed information to stakeholders, make informed decisions, and provide insights.
27.	Thawing Time	The duration needed to allow a frozen item to reach a temperature where it can be effectively used, processed, or consumed.
28.	Traveler's Card	A document or form used in manufacturing and production to track progress of a product or component through various stages of production
29.	Withdrawn Materials	It refers to items or substances that have been removed from inventory or usage due to various reasons, such as quality issues, obsolescence, or changes in demand.
30.	Work Instruction	It provides clear, step by step directions to ensure consistency, quality, and safety in the execution of work.

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