TRAINING REGULATIONS

VISUAL GRAPHIC DESIGN NC III

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY

East Service Road, South Superhighway, Taguig City, Metro Manila

Technical Education and Skills Development Act of 1994
(Republic Act No. 7796)

Section 22, "Establishment and Administration of the National Trade Skills Standards" of the RA 7796 known as the TESDA Act mandates TESDA to establish national occupational skills standards. The Authority shall develop and implement a certification and accreditation program in which private industry group and trade associations are accredited to conduct approved trade tests, and the local government units to promote such trade testing activities in their respective areas in accordance with the guidelines to be set by the Authority.

The Training Regulations (TR) serve as basis for the:

1 Competency assessment and certification;
2 Registration and delivery of training programs; and
3 Development of curriculum and assessment instruments.

Each TR has four sections:

Section 1 **Definition of Qualification** – describes the qualification and defines the competencies that comprise the qualification.

Section 2 The **Competency Standards** format was revised to include the Required Knowledge and Required Skills per element. These fields explicitly state the required knowledge and skills for competent performance of a unit of competency in an informed and effective manner. These also emphasize the application of knowledge and skills to situations where understanding is converted into a workplace outcome.

Section 3 **Training Arrangements** - contain information and requirements which serve as bases for training providers in designing and delivering competency-based curriculum for the qualification. The revisions to section 3 entail identifying the Learning Activities leading to achievement of the identified Learning Outcome per unit of competency.

Section 4 **Assessment and Certification Arrangements** - describe the policies governing assessment and certification procedures for the qualification

TABLE OF CONTENTS

ICT SECTOR

VISUAL GRAPHIC DESIGN

NATIONAL CERTIFICATE LEVEL III

TRAINING REGULATIONS FOR
VISUAL GRAPHIC DESIGN NC III

Section 1 VISUAL GRAPHIC DESIGN NC III QUALIFICATIONS

The **VISUAL GRAPHIC DESIGN NC III** Qualification consists of competencies that a person must achieve to design and develop visual graphic designs for (i) logo; (ii) print media; (iii) user experience; (iv) user interface; (v) product packaging; and (iv) booth and product/window display.

This Qualification is packaged from the competency map of the Information and Communication Technology Industry (Service sector) as shown in Annex A.

The units of competency comprising this qualification include the following:

Code	BASIC COMPETENCIES
500311109	Lead workplace communication
500311110	Lead small teams
500311111	Develop and practice negotiation skills
500311112	Solve problems related to work activities
500311113	Use mathematical concepts and techniques
500311114	Use relevant technologies
500311142	Apply critical thinking and problem solving techniques in the workplace
500311144	Use information creatively and critically
500311145	Work in a diverse environment

Code	COMMON COMPETENCIES
ICT315202	Apply quality standards
ICT311203	Perform computer operations

Code	CORE COMPETENCIES
ICT216313	Develop designs for a logo
ICT216314	Develop designs for print media
ICT216315	Develop designs for user experience
ICT216316	Develop designs for user interface
ICT216317	Develop designs for product packaging
ICT216318	Design booth and product/window display

A person who has achieved this Qualification can be employed in any or more of the following:

- Visual graphic artist/designer
- Creative/Art director
- Visual graphic multimedia artist
- User interface (UI) designer
- User experience (UX) designer
- Package designer
- Booth and product/window display designer

SECTION 2 COMPETENCY STANDARDS

This section gives the details of the contents of the basic, common and core units of competency required in **VISUAL GRAPHIC DESIGN NC III.**

BASIC COMPETENCIES

UNIT OF COMPETENCY : LEAD WORKPLACE COMMUNICATION

UNIT CODE : 500311109

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

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Communicate information about workplace processes	1.1. Appropriate ***communication method*** is selected 1.2. Multiple operations involving several topics areas are communicated accordingly 1.3. Questions are used to gain extra information 1.4. Correct sources of information are identified 1.5. Information is selected and organized correctly 1.6. Verbal and written reporting is undertaken when required 1.7. Communication skills are maintained in all situations	1.1. Organization requirements for written and electronic communication methods 1.2. Effective verbal communication methods 1.3. Methods of Communication 1.4. Types of Question 1.5. Communication Tools 1.6. Questioning Techniques	1.1. Organizing information 1.2. Understanding and conveying intended meaning 1.3. Participating in variety of workplace discussions 1.4. Complying with organization requirements for the use of written and electronic communication methods 1.5. Reporting occupational hazards during safety meeting
2. Lead workplace discussions	2.1. Response to workplace issues are sought 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 plan undertaken in the workplace are communicated	2.1. Leading as a management function 2.2. Barriers of communication 2.3. Effective verbal communication methods 2.4. Method/techniques of discussion 2.5. How to lead discussion 2.6. How to solicit response 2.7. Goal setting and action planning	2.1. Communicating effectively 2.2. Consulting the crew on the prepared menu for the month

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED 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 problems and issues are raised as they arise	3.1 Types of issues and problems in the workplace 3.2 Written and electronic communication methods 3.3 Communication barriers affecting workplace discussions	3.1 Identifying cause of problems 3.2 Identifying problems and issues 3.3 Organizing information on problems and issues 3.4 Relating problems and issues in the workplace

RANGE OF VARIABLES

VARIABLE	RANGE
1. Methods of 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

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1. Dealt with a range of communication/ information at one time 1.2. Made constructive contributions in workplace issues 1.3. Sought workplace issues effectively 1.4. Responded to workplace issues promptly 1.5. Presented information clearly and effectively written form 1.6. Used appropriate sources of information 1.7. Asked appropriate questions 1.8. 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 Competency in this unit must be assessed through 3.2 Direct Observation 3.3 Interview
4. Context for Assessment	1.1. Competency may be assessed in the workplace or in simulated workplace environment

UNIT OF COMPETENCY : LEAD SMALL TEAMS (Guide and Lead Others/Be Responsible to Others)

UNIT CODE : 500311110

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes to lead small teams including setting and maintaining 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 1.2 Reasons for instructions and requirements are communicated to team members 1.3 ***Team members' queries and concerns*** are recognized, discussed and dealt with	1.1. Company policies and procedures 1.2. How performance expectations are set 1.3. Methods of Monitoring Performance 1.4. Client expectations 1.5. Team member's duties and responsibilities 1.6. Definition of Team 1.7. Skills and techniques in promoting team building 1.8. Up-to-date dissemination of instructions and requirements to members 1.9. Art of listening and treating individual team members concern	1.1. Communication skills required for leading teams 1.2. Team building skills 1.3. Negotiating skills 1.4. Evaluation skills
2. Assign responsibilities	2.1. Duties and responsibilities are allocated having regard to the skills, knowledge and aptitude required to properly undertake the assigned task and according to company policy 2.2. Duties are allocated having regard to individual preference, domestic and personal considerations, whenever possible	2.1. Concept of delegation 2.2. How to delegate 2.3. Understanding individual differences 2.4. Methods of monitoring performance 2.5. Duties and responsibilities of each team member 2.6. Knowledge in identifying each team member duties and responsibilities	2.1. Delegating skills 2.2. Identifying individual skills, knowledge and attitude as basis for allocating responsibilities 2.3. Identifying each team member duties and responsibilities
3. Set performance expectations for team members	3.1 Performance expectations are established based on client needs and according to assignment requirements 3.2 Performance expectations are based on individual team member's duties and area of responsibility	3.1. Definition of performance indicators/ criteria 3.2. Definition of team goals and expectations 3.3. Methods of monitoring performance 3.4. Client expectations 3.5. Team member's duties and responsibilities 3.6. Defining performance expectations criteria	3.1. Identifying performance indicators 3.2. Evaluating performance 3.3. Setting individual performance target/ expectation indicators

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.3 Performance expectations are discussed and disseminated to individual team members		
4. Supervise team performance	4.1. ***Monitoring of performance*** takes place against defined performance criteria and/or assignment instructions and corrective action taken if required 4.2. Team members are provided with feedback, positive support and advice on strategies to overcome any deficiencies 4.3. Performance issues which cannot be rectified or addressed within the team are referenced to 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 in accordance with company procedures	4.1. Understanding monitoring of work 4.2. How to undertake corrective action 4.3. Understanding feedback and procedure 4.4. Feedback reporting procedure 4.5. Methods of monitoring performance 4.6. Team member's duties and responsibilities 4.7. Monitoring team operation to ensure client needs and satisfaction	4.1. Monitoring skills 4.2. Setting priorities 4.3. Evaluating performance 4.4. Informal/ formal counseling skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Work requirements	1.1. Client Profile 1.2. Assignment instructions
2. Team member's concerns	2.1 Roster/shift details
3. Monitor performance	3.1 Formal process 3.2 Informal process
4. Feedback	4.1. Formal process 4.2. Informal process
5. Performance issues	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

EVIDENCE GUIDE

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. Direct observations of work activities of the individual member in relation to the work activities of the group 3.2. Observation of simulation and/or role play involving the participation of individual member to the attainment of organizational goal 3.3. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork
4. Context for Assessment	4.1. Competency assessment may occur in workplace or any appropriately simulated environment 4.2. Assessment shall be observed while task are being undertaken whether individually or in-group

UNIT OF COMPETENCY : DEVELOP AND PRACTICE NEGOTIATION SKILLS
UNIT CODE : 500311111

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes required to collect information in order to negotiate to a desired outcome and participate in the negotiation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Plan negotiations	1.1 Information on ***preparing for negotiation*** is identified and included in the plan 1.2 Information on creating ***non-verbal environments*** for positive negotiating is identified and included in the plan 1.3 Information on ***active listening*** is identified and included in the plan 1.4 Information on different ***questioning techniques*** is identified and included in the plan 1.5 Information is checked to ensure it is correct and up-to- date	1.1 Knowledge on Codes of practice and guidelines for the organization 1.2 Knowledge of organizations policy and procedures for negotiations 1.3 Decision making and conflict resolution strategies procedures 1.4 Concept of negotiation	1.1 Communication skills (verbal and listening) 1.2 Active listening 1.3 Setting conflict 1.4 Preparing conflict resolution 1.5 Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation 1.6 Interpersonal skills to develop rapport with other parties
2. Participate in negotiations	2.1 Criteria for successful outcome are agreed upon by all parties 2.2 Desired outcome of all parties are considered 2.3 Appropriate language is used throughout the negotiation 2.4 A variety of questioning techniques are used 2.5 The issues and processes are documented and agreed upon by all parties 2.6 Possible solutions are discussed and their viability assessed 2.7 Areas for agreement are confirmed and recorded 2.8 Follow-up action is agreed upon by all parties	2.1 Outcome of negotiation 2.2 Knowledge on Language 2.3 Different Questioning techniques 2.4 Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation 2.5 Flexibility 2.6 Empathy 2.7 Decision making and conflict resolution strategies procedures 2.8 Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation	2.1 Negotiating skill 2.2 Communication skills (verbal and listening) 2.3 Observation skills 2.4 Interpersonal skills to develop rapport with other parties 2.5 Applying effective questioning techniques 2.6 Setting conflict

RANGE OF VARIABLES

VARIABLE	RANGE
1. Preparing for negotiation	1.1. Background information on other parties to the negotiation 1.2. Good understanding of topic to be negotiated 1.3. Clear understanding of desired outcome/s 1.4. Personal attributes 1.4.1. self awareness 1.4.2. self esteem 1.4.3. objectivity 1.4.4. empathy 1.4.5. respect for others 1.5. Interpersonal skills 1.5.1. listening/reflecting 1.5.2. non- verbal communication 1.5.3. assertiveness 1.5.4. behavior labeling 1.5.5. testing understanding 1.5.6. seeking information 1.5.7. self-disclosing 1.6. Analytic skills 1.6.1. observing differences between content and process 1.6.2. identifying bargaining information 1.6.3. applying strategies to manage process 1.6.4. applying steps in negotiating process 1.6.5. strategies to manage conflict 1.6.6. steps in negotiating process 1.6.7. options within organization and externally for resolving conflict
2. Non- verbal environments	2.1. Friendly reception 2.2. Warm and welcoming room 2.3. Refreshments offered 2.4. Lead in conversation before negotiation begins
3. Active listening	3.1. Attentive 3.2. Don't interrupt 3.3. Good posture 3.4. Maintain eye contact 3.5. Reflective listening
4. Questioning techniques	4.1. Direct 4.2. Indirect 4.3. Open-ended

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** Demonstrated sufficient knowledge of the factors influencing negotiation to achieve agreed outcome Participated in negotiation with at least one person to achieve an agreed outcome
2. Resource Implications	**The following resources should be provided:** 2.1 Room with facilities necessary for the negotiation process 2.2 Human resources (negotiators)
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Observation/demonstration and questioning 3.2 Portfolio assessment 3.3 Oral and written questioning 3.4 Third party report
4. Context for Assessment	4.1 Competency to be assessed in real work environment or in a simulated workplace setting.

UNIT OF COMPETENCY : SOLVE PROBLEMS RELATED TO WORK ACTIVITIES

UNIT CODE : 500311112

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

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify the problem	1.1. Variances are identified from normal operating parameters; and product quality 1.2. Extent, cause and nature of the problem are defined through observation, investigation and ***analytical techniques*** 1.3. ***Problems*** 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 non-standard situations 1.2. Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations 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 1.7. Industry codes and standards 1.8. Normal operating parameters and product quality	1.1 Using range of formal problem solving techniques 1.2 Identifying and clarifying the nature of the problem 1.3 Evaluating the effectiveness of a present process in the workplace 1.4 Applying analytical techniques
2. Determine fundamental causes of the problem	2.1 Possible causes 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	2.1 Relevant equipment and operational processes 2.2 Enterprise goals, targets and measures 2.3 Enterprise quality, OHS and environmental requirements 2.4 Enterprise information systems and data collation 2.5 Industry codes and standards	2.1 Analysis of root causes

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Determine corrective action	3.1 All possible options are considered for resolution of the problem 3.2 Strengths and weaknesses of 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	3.1 Understanding the procedure in undertaking corrective action 3.2 Principles of decision making strategies and techniques 3.3 Enterprise information systems and data collation 3.4 Action planning	3.1 Identifying and clarifying the nature of the problem 3.2 Devising the best solution 3.3 Evaluating the solution 3.4 Implementing developed plan to rectify the problem 3.5 Implementing corrective and preventive actions based on root cause analysis
4. Provide recommenda-tion/s to manager	4.1 Report on recommendations are prepared according to procedures. 4.2 Recommendations are presented to appropriate personnel. 4.3 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 non-standard situation 4.2 How to make a report and recommendation	4.1 Using range of formal problem solving techniques 4.2 Identifying and clarifying the nature of the problem 4.3 Devising the best solution 4.4 Evaluating the solution 4.5 Implementation of a developed plan to rectify the problem 4.6 Writing report and recommenda-tions

RANGE OF VARIABLES

VARIABLE	RANGE
1. Analytical techniques	1.1. Brainstorming 1.2. Intuitions/Logic 1.3. Cause and effect diagrams 1.4. Pareto analysis 1.5. SWOT analysis 1.6. Gant chart, Pert CPM and graphs 1.7. Scattergrams
2. Problem	2.1. Non – routine process and quality problems 2.2. Equipment selection, availability and failure 2.3. Teamwork and work allocation problem 2.4. Safety and emergency situations and incidents
3. Action plans	3.1. Priority requirements 3.2. Measurable objectives 3.3. Resource requirements 3.4. Timelines 3.5. Co-ordination and feedback requirements 3.6. Safety requirements 3.7. Risk assessment 3.8. Environmental requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1. Identified the problem 1.2. Determined the fundamental causes of the problem 1.3. Determined the correct / preventive action 1.4. Provided recommendation to manager These aspects may be best assessed using a range of scenarios / case studies / what ifs as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.
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. Written Examination 3.2. Oral Questioning 3.3. Portfolio
4. Context for Assessment	4.1. In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY : USE MATHEMATICAL CONCEPTS AND TECHNIQUES

UNIT CODE : 500311113

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required in application of mathematical concepts and techniques.

ELEMENTS	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify mathematical tools and techniques to solve problem	1.1 Problem areas are identified based on given condition 1.2 ***Mathematical techniques*** are selected based on the given problem	1.1 Fundamental operation (addition, subtraction, division, multiplication) 1.2 Units of measurement and its conversion 1.3 Fundamental of units 1.4 Standard formulas 1.5 Basic measuring tools/devices 1.6 Measurement system 1.7 Basic measuring tools/devices 1.8 Steps in solving problem	1.1 Identifying and selecting different measuring tools 1.2 Applying different formulas in solving problems 1.3 Describing the units of measurement and fundamental units 1.4 Stating arithmetic calculations involving the following; addition, subtraction, division, multiplication 1.5 Applying theory into actual application on shipboard catering processes
2. Apply mathematical procedure/ solution	1.1. Mathematical techniques are applied based on the problem identified 1.2. Mathematical computations are performed to the level of accuracy required for the problem 1.3. Result of mathematical computation is determined and verified based on job requirements	2.1 Problem-based questions 2.2 Estimation 2.3 Use of mathematical tools and standard formulas 2.4 Mathematical techniques	2.1 Solving mathematical computations 2.2 Converting Metric to English 2.3 Selecting and using appropriate and efficient techniques and strategies to solve problems
3. Analyze results	3.1 Result of application is reviewed based on expected and required specifications and outcome 3.2 ***Appropriate action*** is applied in case of error	3.1 Techniques in analyzing the results 3.2 Process in reviewing the results 3.3 Precision and accuracy 3.4 Four fundamental	3.1 Analyzing the result based on the specified requirements 3.2 Interpreting and communicating the results of the analysis

ELEMENTS	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		operations 3.5 Steps in solving problem 3.6 Standard formulas 3.7 Conversion measurement	

RANGE OF VARIABLES

VARIABLES	RANGE
1. Mathematical techniques	May include: 1.1 Four fundamental operations 1.2 Measurements 1.3 Use/Conversion of units of measurements 1.4 Use of standard formulas
2. Appropriate action	2.1 Review in the use of mathematical techniques (e.g. recalculation, re-modeling) 2.2 Report error to immediate superior for proper action

EVIDENCE GUIDE

1. Critical Aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Identified, applied and reviewed the use of mathematical concepts and techniques to workplace problems
1. Resource Implications	**The following resources should be provided:** 2.1 Calculator 2.2 Basic measuring tools 2.3 Case Problems
2. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Authenticated portfolio 3.2 Written Test 3.3 Interview/Oral Questioning 3.4 Demonstration
4. Context for Assessment	4.1 Competency may be assessed in the work place or in a simulated work place setting

UNIT OF COMPETENCY : USE RELEVANT TECHNOLOGIES
(Apply technology effectively)

UNIT CODE : 500311114

UNIT DESCRIPTOR : This unit of competency covers the knowledge, skills, and attitude required in selecting, sourcing and applying appropriate and affordable technologies in the workplace.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Study/select appropriate technology	1.1. Usage of different ***technologies*** is determined based on job requirements 1.2. Appropriate technology is selected as per work specification	1.1. Awareness on technology and its function 1.2. Communication techniques 1.3. Health and safety procedure 1.4. Company policy in relation to relevant technology 1.5. Machineries/ equipment and their application 1.6. Software programs	1.1. Identifying relevant technology on job
2. Apply relevant technology	2.1. Relevant technology is effectively used in carrying out function 2.2. Applicable software and hardware are used as per task requirement 2.3. ***Management concepts*** are observed and practiced as per established industry practices	2.1 Knowledge on operating instructions 2.2 Understanding software and hardware system 2.3 Communication techniques 2.4 Health and safety procedure 2.5 Company policy in relation to relevant technology 2.6 Different management concepts 2.7 Technology adaptability	2.1 Applying relevant technology 2.2 Communicating skills 2.3 Using software applications skills 2.4 Conducting risk assessment
3. Maintain/ enhance relevant technology	3.1. Maintenance of technology is applied in accordance with the ***industry standard operating procedure***, ***manufacturer's operating guidelines***	3.1 Awareness on technology and its function 3.2 Repair and maintenance procedure	3.1 Performing basic troubleshooting skills 3.2 Identifying failures or defects 3.3 Communication skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	and ***occupational health and safety procedure*** to ensure its operative ability 3.2. Updating of technology is maintained through continuing education or training in accordance with job requirement 3.3. Technology failure/ defect is immediately reported to the concern/responsible person or section for ***appropriate action***	3.3 Health and safety procedure 3.4 Company policy in relation to relevant technology 3.6 Upgrading of technology 3.7 Organizational set-up/work flow	3.4 Applying corrective and preventive maintenance

RANGE OF VARIABLES

VARIABLE	RANGE
1. Technology	May include but are not limited to: 1.1. Office technology 1.2. Industrial technology 1.3. System technology 1.4. Information technology 1.5. Training technology
2. Management concepts	May include but not limited to: 2.1. Real Time Management 2.2. KAIZEN or continuous improvement 2.3. 5s 2.4. Total Quality Management 2.5. Other management/productivity tools
3. Industry standard operating procedure	3.1. Written guidelines relative to the usage of office technology/equipment 3.2. Verbal advise/instruction from the co-worker
4. Manufacturer's operating guidelines/ instructions	4.1. Written instruction/manuals of specific technology/ equipment 4.2. General instruction manual 4.3. Verbal advise from manufacturer relative to the operation of equipment
5. Occupational health and safety procedure	5.1. Relevant statutes on OHS 5.2. Company guidelines in using technology/equipment
6. Appropriate action	6.1. Implementing preventive maintenance schedule 6.2. Coordinating with manufacturer's technician

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Studied and selected appropriate technology consistent with work requirements 1.2 Applied relevant technology 1.3 Maintained and enhanced operative ability of relevant technology
2. Resource Implications	The following resources **MUST** be provided: 2.1 Relevant technology 2.2 Interview and demonstration questionnaires 2.3 Assessment packages
3. Methods of Assessment	Competency must be assessed through: 3.1 Interview 3.2 Actual demonstration 3.3 Authenticated portfolio (related certificates of training/seminar)
4. Context for Assessment	4.1 Competency may be assessed in actual workplace or simulated environment

UNIT OF COMPETENCY: APPLY CRITICAL THINKING AND PROBLEM SOLVING TECHNIQUES IN THE WORKPLACE

UNIT CODE : 500311142

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

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify the problem	1.1. Variances are identified from normal operating parameters; and product quality 1.2. Extent, cause and nature are of the problem are defined through observation, investigation and ***analytical techniques*** 1.3. ***Problems*** are clearly stated and specified	1.1. Planning and preparing task/activity 1.2. Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations 1.3. Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations 1.3.1. Relevant equipment and operational processes 1.3.2. Enterprise goals, targets and measures 1.3.3. Enterprise quality, OHS and environmental requirement 1.3.4. Enterprise information systems and data collation 1.3.5. Industry codes and standards	1.1. Using range of formal problem solving techniques 1.2. Identifying and clarifying the nature of the problem
2. Determine fundamental causes of the problem	2.1. Possible causes 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	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 2.2.1. Relevant equipment and operational processes	2.1. Using range of formal problem solving techniques 2.2. Identifying and clarifying the nature of the problem

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		2.2.2. Enterprise goals, targets and measures 2.2.3. Enterprise quality, OHS and environmental requirement 2.2.4. Enterprise information systems and data collation 2.2.5. Industry codes and standards	
3. Determine corrective action	3.1. All possible options are considered for resolution of the problem 3.2. Strengths and weaknesses of 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	3.1. Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations 3.2. Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations 3.2.1. Relevant equipment and operational processes 3.2.2. Enterprise goals, targets and measures 3.2.3. Enterprise quality, OHS and environmental requirement 3.2.4. Principles of decision making strategies and techniques 3.2.5. Enterprise information systems and data collation 3.2.6. Industry codes and standards	3.1. Using range of formal problem solving techniques 3.2. Identifying and clarifying the nature of the problem 3.3. Devising the best solution 3.4. Evaluating the solution 3.5. Implementation of a developed plan to rectify the problem
4. Provide recommendation/s to manager	4.1. Report on recommendations are prepared 4.2. Recommendations are presented to appropriate personnel. 4.3. 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 explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations	4.1. Using range of formal problem solving techniques 4.2. Identifying and clarifying the nature of the problem 4.3. Devising the best solution 4.4. Evaluating the solution 4.5. Implementation of a developed

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		4.1.1. Relevant equipment and operational processes 4.1.2. Enterprise goals, targets and measures 4.1.3. Enterprise quality, OHS and environmental requirement 4.1.4. Principles of decision making strategies and techniques 4.1.5. Enterprise information systems and data collation 4.1.6. Industry codes and standards	plan to rectify the problem

.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Analytical techniques	May include: 1.1. Brainstorming 1.2. Intuitions/Logic 1.3. Cause and effect diagrams 1.4. Pareto analysis 1.5. SWOT analysis 1.6. Gant chart, Pert CPM and graphs 1.7. Scattergrams
2. Problem	May include: 2.1. Non – routine process and quality problems 2.2. Equipment selection, availability and failure 2.3. Teamwork and work allocation problem 2.4. Safety and emergency situations and incidents
3. Action plans	May include: 3.1. Priority requirements 3.2. Measurable objectives 3.3. Resource requirements 3.4. Timelines 3.5. Co-ordination and feedback requirements 3.6. Safety requirements 3.7. Risk assessment 3.8. Environmental requirements

.

EVIDENCE GUIDE

1. Critical aspect of competency	Assessment requires evidence that the candidate: 1.1. Identified the problem 1.2. Determined the fundamental causes of the problem 1.3. Determined the correct / preventive action 1.4. Provided recommendation to manager These aspects may be best assessed using a range of scenarios / case studies / what ifs as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.
2. Resource implication	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. Method of assessment	Competency in this unit may be assessed through: 3.1. Case studies on solving problems in the workplace 3.2. Observation 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
4. Context of Assessment	4.1. In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units

UNIT OF COMPETENCY: USE INFORMATION CREATIVELY AND CRITICALLY
UNIT CODE : 500311144
UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to use technical information system and information technology, and apply information technology (IT).

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Use technical information systems and information technology	1.1. Collate and organize ***information*** into a suitable form for reference and use 1.2. Classify stored information so that it can be quickly identified and retrieved when needed 1.3. Advise and offer guidance to people who need to find and use information 1.4. Operate the ***technical information*** system using agreed procedures 1.5. Operate appropriate and valid procedures for inputting, maintaining and archiving 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. Utilize the ***software and IT systems*** that are required to execute the project activities 2.2. Handle, edit, format and check information and data obtained from a range of internal and external ***sources*** 2.3. Extract, enter, and process information to produce the outputs required by ***customers*** 2.4. Share your own skills and understanding to help others 2.5. Implement the specified ***security measures*** to protect the confidentiality and integrity of project data held in IT systems	2.1. Attributes and limitations of available software tools 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	2.1. Identifying attributes and limitations of 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

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Edit, format and check information	3.1. Basic editing techniques is used 3.2. Accuracy of documents are check 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	3.1. Basic file-handling techniques 3.2. Techniques in checking documents 3.3. Techniques in editing and formatting 3.4. Proof reading techniques	3.1. Using basic file-handling techniques is used for the software 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 and IT systems	May include: 3.1 Spreadsheets 3.2 Databases 3.3 Word processing 3.4 Presentation
4. Sources	May include: 4.1 Other IT system 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

EVIDENCE GUIDE

1. Critical aspect of competency	Assessment requires evidence that the candidate: 1.1. Used technical information systems and information technology 1.2. Applied information technology (IT) 1.3. Edited, formatted and checked information
2. Resource implication	The following resources should be provided: 2.1. Computers 2.2. Software and IT system
3. Method of assessment	Competency in this unit may be assessed through: 3.1. Direct observation 3.2. Oral interview and written test
4. Context of Assessment	4.1. Competency may be assessed individually in the actual workplace or through accredited institution

UNIT OF COMPETENCY: WORK IN A DIVERSE ENVIRONMENT
UNIT CODE : 500311145
UNIT DESCRIPTOR : This unit of covers the knowledge, skills and attitudes 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. ***Diversity*** is accommodated using appropriate verbal and nonverbal communication. 1.4. Actions/decisions are maintained consistent with legislative requirements and enterprise guidelines.	1.1. Understanding cultural diversity in the workplace 1.2. Awareness of individual cultures and world geography 1.3. Norms of behavior for interacting and dialogue with specific groups (e.g., Muslims and other non-Christians, non-Catholics, tribes/ethnic groups, foreigners) 1.4. Different methods of verbal and non-verbal communication in a multicultural setting 1.5. Enterprise policies on workplace diversity (Workplace Diversity Policy)	1.1. Cross-cultural communication skills (i.e. different business customs, beliefs, communication strategies) 1.2. Communication skills – reading, writing, conversational skills 1.3. Affective skills – establishing rapport and empathy, understanding, etc. 1.4. Active Listening 1.5. Openness and flexibility in communication 1.6. Giving/receiving feedback 1.7. Identifying/ 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. 2.2. 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.	2.1. Recognizing and explaining the value of diversity in the economy and society in terms of Workforce development 2.2. The country's place in the global economy 2.3. Innovation 2.4. Social justice 2.5. Recognizing the importance of inclusiveness in a diverse environment 2.6. Developing a	2.1. Cross-cultural communication skills 2.2. Communication skills – reading, writing, conversational skills 2.3. Affective skills – establishing rapport and empathy, understanding, etc. 2.4. Active Listening 2.5. Openness and flexibility in communication 2.6. Giving/receiving feedback 2.7. Identifying/ Recognizing diverse groups in the

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		shared vision and understanding of and commitment to team, departmental, and organizational goals and objectives 2.7. Strategies for customer service excellence	workplace and community as defined by divergent culture, religion, traditions and practices 2.8. Teamwork and collaboration skills 2.9. Intercultural relations and mutual acceptance 2.10. 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 behavior towards customers/ stakeholders are minimized and addressed accordingly. 3.3. Change management policies are in place within the organization.	3.1. Understanding, valuing, and leveraging cultural diversity 3.2. Promoting inclusivity and conflict resolution 3.3. Addressing workplace harassment 3.4. Managing change and overcoming resistance to change 3.5. Advanced strategies for customer service excellence 3.6. Enterprise policies on workplace diversity (Workplace Diversity Policy)	3.1. Cross-cultural communication skills 3.2. Communication skills – reading, writing, conversational skills 3.3. Affective skills – establishing rapport and empathy, understanding, etc. 3.4. Active Listening 3.5. Openness and flexibility in communication 3.6. Giving/receiving feedback 3.7. Teamwork and collaboration skills 3.8. Intercultural relations and mutual acceptance 3.9. Advanced customer service excellence skills 3.10. Conflict management and resolution skills 3.11. Assertiveness and Negotiation

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

EVIDENCE GUIDE

1. Critical aspect 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 implication	The following resources should be provided: 2.1. Access to workplace and resources 2.2. Manuals and policies on Workplace Diversity
3. Method 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 of Assessment	4.1. Competency assessment may occur in workplace or any appropriately simulated environment

COMMON COMPETENCIES

UNIT TITLE : APPLY QUALITY STANDARDS

UNIT CODE : ICT315202

UNIT DESCRIPTOR : This unit covers the knowledge, skills, 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
1. Assess quality of received materials	1.1. Work instruction is obtained and work is carried out in accordance with standard operating procedures. 1.2. Received ***materials*** are checked against workplace standards and specifications. 1.3. Faulty materials 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 are replaced in accordance with workplace procedures.	1.1. Relevant production processes, materials and products 1.2. Characteristics of materials, software and hardware used in production processes 1.3. Quality checking procedures 1.4. Quality Workplace procedures 1.5. Identification of faulty materials related to work	1.1. Reading skills required to interpret work instruction 1.2. Critical thinking 1.3. Interpreting work instructions
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. ***Errors*** are identified and isolated. 2.4. Information on the quality and other indicators of production performance are recorded in accordance with workplace procedures. 2.5. In cases of deviations from specific ***quality standards***, causes are documented and reported in accordance with	2.1. Safety and environmental aspects of production processes 2.2. Fault identification and reporting 2.3. Workplace procedure in documenting completed work 2.4. Workplace Quality Indicators	2.1. Carry out work in accordance with OHS policies and procedures

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	the workplace' s standards operating procedures.		
3. Engage in quality improvement	3.1. Process improvement procedures are participated in relative to workplace assignment. 3.2. Work is carried out in accordance with process improvement procedures. 3.3. Performance of operation or quality of product of service to ensure ***customer*** satisfaction is monitored.	3.1 Quality improvement processes 3.2 Company customers defined	3.1 Solution providing and decision-making 3.2 Practice company process improvement procedure

RANGE OF VARIABLES

VARIABLE	RANGE
1. Materials	1.1. Materials may include but not limited to: 1.1.1. Manuals 1.1.2. Job orders 1.1.3. Instructional videos
2. Faults	2.1. Faults may include but not limited to: 2.1.1. Materials not to specification 2.1.2. Materials contain incorrect/outdated information 2.1.3. Hardware defects 2.1.4. Materials that do not conform with any regulatory agencies
3. Documentation	3.1. Organization work procedures 3.2. Manufacturer's instruction manual 3.3. Customer requirements 3.4. Forms
4. Errors	4.1. Errors may be related but not limited to the following: 4.1.1. Deviation from the requirements of the Client 4.1.2. Deviation from the requirement of the organization
5. Quality standards	5.1. Quality standards may be related but not limited to the following: 5.1.1. Materials 5.1.2. Hardware 5.1.3. Final product 5.1.4. Production processes 5.1.5. Customer service
6. Customer	6.1. Co-worker 6.2. Supplier/Vendor 6.3. Client 6.4. Organization receiving the product or service

EVIDENCE GUIDE

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	3.1. Materials, software and hardware to be used in a real or simulated situation
4. Context of Assessment	4.1. 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 according to job specifications 1.2. Appropriate ***hardware*** and ***software*** are selected according to task assigned and required outcome 1.3. Task is planned to ensure ***OH&S guidelines*** 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.	1.1. Main types of computers and basic features of different operating systems 1.2. Main parts of a computer 1.3. Information on hardware and software 1.4. Data security guidelines	1.1. Reading and comprehension skills required to interpret work instruction and to interpret basic user manuals. 1.2. Communication skills to identify lines of communication, request advice, follow instructions and receive feedback. 1.3. 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 saved in accordance with standard operating procedures 2.3. Inputted data are stored in ***storage media*** according to requirements 2.4. Work is performed within ***ergonomic guidelines***	2.1. Basic ergonomics of keyboard and computer user 2.2. Storage devices and basic categories of memory 2.3. Relevant types of software	2.1. Technology skills to use equipment safely including keyboard skills. 2.2. Entering data
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. ***Desktop icons*** are correctly selected, opened and closed for navigation	3.1. General security, privacy legislation and copyright 3.2. Productivity Application 3.3. Business Application	3.1. Accessing information 3.2. Searching and browsing files and data

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	purposes 3.4. Keyboard techniques are carried out in line with OH&S requirements for safe use of keyboards		
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 compatible systems using computer software, hardware/ peripheral devices in accordance with standard operating procedures	4.1 Computer application in printing, scanning and sending facsimile 4.2 Types and function of computer peripheral devices	4.1 Computer data processing 4.2 Printing of data 4.3 Transferring files and data
5. Maintain computer equipment and systems	5.1. Systems for cleaning, minor ***maintenance*** and replacement of consumables are implemented 5.2. Procedures for ensuring security of data, including regular back-ups and virus checks are implemented in accordance with standard operating procedures 5.3. Basic file maintenance procedures are implemented in line with the standard operating procedures	5.1 Computer equipment/system basic maintenance procedures 5.2 Viruses 5.3 OH&S principles and responsibilities 5.4 Calculating computer capacity 5.5 System Software 5.6 Basic file maintenance procedures	5.1 Removing computer viruses from infected machines 5.2 Making backup files

RANGE OF VARIABLES

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
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
3. OH & S guidelines	3.1. OHS guidelines 3.2. Enterprise procedures
4. Storage media	Storage media include the following but not limited to: 4.1. diskettes 4.2. CD and DVDs 4.3. zip disks 4.4. hard disk drives, local and remote
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
7. Maintenance	7.1. Creating more space in the hard disk 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 Cleaning dust from internal and external surfaces

EVIDENCE GUIDE

1. Critical aspect of competency	Assessment requires evidence that the candidate: 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
2. Method of assessment	2.1. The assessor may select two 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	3.1. Computer hardware with peripherals 3.2. Appropriate software
4. Context of Assessment	4.1. Assessment may be conducted in the workplace or in a simulated work environment

CORE COMPETENCIES

UNIT TITLE: DEVELOP DESIGNS FOR A LOGO
UNIT CODE: ICT216313
UNIT DESCRIPTOR: This unit covers the knowledge, skills and attitude required to incorporate the principles of visual design and communication into the development of designs for a logo for use in various industries.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive and interpret the logo design brief	1.1. The instructions & specifications to develop the logo is read & analyzed based on the ***design brief*** 1.2. The objective to produce the ***desired outcome*** of logo design are identified based on the client and /or the company directives. 1.3. Information needed via research and other ***resources*** to develop logo concepts is identified. 1.4. Process and ***steps of submission*** of logo design for approval is confirmed with the client and/or a supervisor. 1.5. All relevant questions essential to develop the logo design is discussed and liaised with ***relevant personnel.***	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Behavioral Science 1.5. Elements of design 1.6. Principles of design 1.7. Computer knowledge 1.8. software knowledge 1.9. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 1.10. Trends 1.11. Basic Math 1.12. Economics (Pricing)	1.1. Communication skills 1.2. Interpersonal skills 1.3. Listening skills 1.4. Critical Thinking 1.5. Analytical and comprehension Skills 1.6. Reporting skills 1.7. Presentation skills 1.8. Practicing OSHS, EHSM, 3Rs
2. Select materials & equipment to develop logo design	2.1. All necessary ***materials and equipment*** to be used are selected and prepared according to the task to be undertaken. 2.2. Appropriate ***software*** is selected and checked based on the final ***format*** specified in the design brief. 2.3. Non-functioning and missing materials and equipment are reported to ***appropriate personnel***	2.1. Verbal communication 2.2. Written communication 2.3. Intellectual property 2.4. Behavioral Science 2.5. Physics 2.6. Computer knowledge 2.7. software knowledge 2.8. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 2.9. Trends 2.10. Basic Math	2.1. Effective Communication skills 2.2. Computer operation skills 2.3. Reporting skills 2.4. Analytical and comprehension skills 2.5. Software usage skills 2.6. Practicing OSHS, EHSM, 3Rs

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Develop logo design concepts	3.1. Ideas for design concept of the logo are generated through research. 3.2. Different sketches and ***design style*** experimentation are explored in accordance with logo design instructions 3.3. Initial design concepts developed are toned down to align with design brief parameters 3.4. Appropriate ***font*** is used or designed should this be a part of the logo design specifications. 3.5. Color combinations are experimented to compliment concept designs or to follow color specifications of the design brief 3.6. ***Visual design and communication elements*** are incorporated to the concepts in line with the direction of the design brief. 3.7. Best design sketch options are selected based on design brief requirements. 3.8. Final rough designs in the format required are prepared and submitted to client and /or supervisor for comments.	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Behavioral Science 3.5. Human and Animal Anatomy 3.6. Principles of design 3.7. Elements of design 3.8. Typography 3.9. Physics 3.10. Visual Design & communication techniques 3.11. Computer knowledge 3.12. Familiarity in different graphic software applications 3.13. internet browsing/ research 3.14. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 3.15. Trends 3.16. Geometry 3.17. Basic Math 3.18. Algebra	3.1. Artistic and creative skills 3.2. Design and drawing skills 3.3. Visual communication skills 3.4. Computer application skills 3.5. Computer/ application troubleshooting skills 3.6. Critical thinking & analytical skills 3.7. Researching skills 3.8. Communication skills 3.9. Reporting skills 3.10. Software usage skills 3.11. Documentation & organizational skills 3.12. Practicing OSHS, EHSM, 3RS
4. Edit / Revise logo design	4.1. Comments received from client and / or supervisor are analyzed to revise initial logo concepts, designs and sketches. 4.2. Adjustments are made to produce final specifications as required by client and/ or supervisor 4.3. Colors are enhanced & technically identified as per specified design directives. 4.4. Font selected or designed is aligned and suggested	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Behavioral Science 4.5. Human and Animal Anatomy 4.6. Principles of design 4.7. Elements of design 4.8. Physics 4.9. Computer knowledge 4.10. Familiarity in	4.1. Artistic and creative skills 4.2. Design and drawing skills 4.3. Visual communication skills 4.4. Computer application skills 4.5. Computer/ application troubleshooting skills 4.6. Critical thinking &

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	in places to fit the overall look of the logo design 4.5. Revised draft logo design in the format required is prepared and submitted to client and/or supervisor for final comments	different graphic software applications 4.11. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 4.12. Trends 4.13. Geometry 4.14. Basic Math 4.15. Algebra	analytical skills 4.7. Researching skills 4.8. Communication skills 4.9. Reporting skills 4.10. Software usage skills 4.11. Documentation & Organizational skills 4.12. Practicing OSHS, EHSM, 3Rs
5. Finalize logo design	5.1. Client and/ or supervisor final feedback are collected and analyzed. 5.2. Final revisions of the logo design are adjusted according to design specifications 5.3. Chosen or designed font and layout are adjusted to fit final logo design. 5.4. Final colors are applied to logo design as required in the feedback and design specifications 5.5. Final measurements, ***color codes*** and technicalities of the logo design are finalized and documented for appropriate usage. 5.6. Final logo design with proper ***documentation of design details*** are prepared and submitted to client and/or supervisor for final approval.	5.1. Verbal communication 5.2. Written communication 5.3. Intellectual property 5.4. Behavioral Science 5.5. Human and Animal Anatomy 5.6. Principles of design 5.7. Elements of design 5.8. Computer knowledge 5.9. Familiarity in different graphic applications 5.10. Printing Knowledge 5.11. Geometry 5.12. Algebra 5.13. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 5.14. Trends 5.15. Geometry 5.16. Basic Math 5.17. Algebra	5.1. Artistic and creative skills 5.2. Design and drawing skills 5.3. Visual communication skills 5.4. Computer application skills 5.5. Computer/ application troubleshooting skills 5.6. Critical thinking & analytical skills 5.7. Communication skills 5.8. Reporting skills 5.9. Software usage skills 5.10. Documentation & organizational skills 5.11. Practicing OSHS, EHSM, 3Rs

RANGE OF VARIABLES

VARIABLE	RANGE
1. design brief	May include the following : 1.1. Project Statement 1.2. Project Objectives 1.3. Variables 1.4. Statistical Interpretation 1.5. Conclusions and Recommendations 1.6. Bibliography / References
2. Desired outcome	May include the following logo design outcome : 2.1. Branding for a company 2.2. Branding for a product 2.3. Branding for a person/ Group 2.4. Branding for an ad campaign 2.5. Branding for a service
3. Resources	May include : 3.1. Books / magazines 3.2. Internet 3.3. DVDs / Videos 3.4. Photographs 3.5. Images
4. Steps of submission	May include the following steps: 4.1. Submit sketches in paper/ scanned format 4.2. Submit sketches in digital format 4.3. Submit sketches first, color suggestions after 4.4. Submit in full color 4.5. Submit with specific number of sketches & designs 4.6. Submit with certain deadlines indicated
5. Relevant personnel	May include the following: 5.1. Creative/art director 5.2. Client 5.3. Head of department 5.4. Supervisor
6. Materials	May include : 6.1. Paper / sketchpad / tracing paper 6.2. Lead & colored pencils 6.3. Colored pens / sign pen 6.4. Markers 6.5. USB / flash drive 6.6. Watercolor / poster color 6.7. Ruler 6.8. Compass 6.9. Scissors 6.10. Glue / tape 6.11. Paper clips 6.12. Design books / magazines

VARIABLE	RANGE
7. Equipment	May include : 7.1. Drawing table 7.2. Computer with peripherals 7.3. Removable hard drive 7.4. Chair 7.5. Internet 7.6. Drawing tablet 7.7. Mobile phone 7.8. Camera 7.9. Laptop
8. Software	May include: 8.1. Adobe Photoshop 8.2. CorelDraw 8.3. Adobe InDesign 8.4. Adobe Illustrator 8.5. Paint tools SAI 8.6. Gimp / Krita (open source) 8.7. MS Paint
9. Appropriate personnel	May include : 9.1. Technical person 9.2. IT person 9.3. Department Head 9.4. Administration Head 9.5. Supervisor 9.6. Production Manager
10. Design Style	May include : 10.1. Minimalist 10.2. Goth 10.3. Classic 10.4. modern 10.5. Western 10.6. Asian etc.
11. Font	May include the following : 11.1. Arial 11.2. Times Roman 11.3. Comic sans 11.4. Impact 11.5. Century Gothic 11.6. script 11.7. Courier 11.8. Lithos 11.9. Myriad etc.
12. Color codes	May include : 12.1. HTML color codes 12.2. Hex color code 12.3. RGB color code 12.4. CMYK code

VARIABLE	RANGE
	12.5. Pantone colors
13. Documentation	May include the following : 13.1. Design Brief 13.2. Design measurements 13.3. Design layout 13.4. Color combination & codes
14. Visual Design & Communication Elements	May include the following: 14.1. Colors 14.2. Composition 14.3. Proportion 14.4. Balance 14.5. Framing 14.6. Line 14.7. Texture 14.8. Shape 14.9. Form 14.10. Tone 14.11. Scale 14.12. Movement or animation 14.13. Fonts/typography: 14.13.1. Typeface 14.13.2. Type style 14.13.3. Point / font size 14.13.4. Tracking 14.13.5. Leading 14.13.6. Kerning

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted and analyzed the design brief to generate a feasible range of design and ideas 1.2. Selected and identified the appropriate software to use in designing the logo 1.3. Developed and revised logo designs according to the specified design requirements and feedback given 1.4. Finalized logo design to the specific format specifications
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. interview
3. Resources required for assessment	3.1. Appropriate supplies and materials 3.2. Applicable equipment
4. Context of assessment	4.1. Assessment maybe conducted in the workplace or in a simulated environment

UNIT TITLE: **DEVELOP DESIGNS FOR PRINT MEDIA**
UNIT CODE: **ICT216314**
UNIT DESCRIPTOR: This unit describes the skills and knowledge required to conceptualize and design for posters, tarpaulin, magazine, brochures, invitation and other kinds of design intended for printed material output or format for personal, industrial and commercial use.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Interpret and analyze the print media design brief	1.1. The instructions & specifications to develop the design for the specific ***print media*** *requirement* is analyzed based on the ***design brief*** 1.2. The scope of work and deadline schedules of the proposed design is clarified in detail from the ***relevant personnel*** 1.3. Information needed via research and other ***resources*** to develop required designs for print is identified. 1.4. ***Approval stages*** of submitted design concepts is confirmed with the client and/or a supervisor. 1.5. ***Print format*** of the approved design is identified with all its specifications based on the design brief. 1.6. All questions essential to develop the design for print is discussed and liaised with relevant personnel.	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Behavioral Science 1.5. Elements of design 1.6. Principles of design 1.7. Computer knowledge 1.8. software knowledge 1.9. Materials specifications 1.10. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 1.11. Trends 1.12. Basic Math 1.13. Economics (Pricing)	1.1. Communication skills 1.2. Interpersonal skills 1.3. Listening skills 1.4. Critical Thinking 1.5. Analytical and comprehension skills 1.6. Reporting skills 1.7. Presentation skills 1.8. Practicing OSHS, EHSM, 3Rs
2. Prepare equipment & materials for print media design	2.1. All necessary ***materials*** and ***equipment*** to be used are prepared according to the specifications of the design brief 2.2. Appropriate ***software*** is selected and checked based on the format specified for the final print media output. 2.3. Monitor is calibrated to show the correct color grading of designs 2.4. ***Color scheme*** or ***print palettes*** are organized and arranged to suit requirements	2.1. Verbal communication 2.2. Written communication 2.3. Intellectual property 2.4. Behavioral Science 2.5. Elements of design 2.6. Principles of design 2.7. Computer knowledge 2.8. software knowledge 2.9. Practicing 3Rs – Reduce, Re-use,	2.1. Artistic & Creative skills 2.2. Communication skills 2.3. Computer operation skills 2.4. Reporting skills 2.5. Analytical and comprehension skills 2.6. Software usage skills 2.7. Practicing OSHS, EHSM, 3Rs

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	of final design output. 2.5. Page size, orientation, appropriate resolution are selected based on the design brief specifications 2.6. Non-functioning and missing materials and equipment are reported to ***appropriate personnel***	Recycle/recover and environmental policies. 2.10. Trends 2.11. Basic Math	
3. Develop designs for the specific print media output	3.1. Ideas for design concepts of the specified print output are generated through research and sketches experimentation. 3.2. Appropriate ***Document / page set up*** is applied based on the design brief requirements 3.3. Different print or ***graphic design style*** options are explored and sketched basing on the design parameters. 3.4. Required text copy, words, tagline or message for print is prepared and analyzed for appropriate layout placement. 3.5. Font style, color and size are carefully selected and placed in a proper layout to fit overall design output 3.6. All ***Elements*** created are organized on different ***comprehensive layout/ compre*** to experiment on the best arrangements for design presentation. 3.7. Graphic images, product shots, photographs and other elements can be imported from other applications and added to the comprehensive layout. 3.8. Color combinations are experimented to compliment concept designs 3.9. Final rough comprehensive layout designs in the format required are prepared and submitted to client and /or supervisor for comments and revisions.	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Behavioral Science 3.5. Human and Animal Anatomy 3.6. Principles of design 3.7. Elements of design 3.8. Graphic design styles 3.9. Philosophy 3.10. Computer knowledge 3.11. Familiarity in different graphic applications 3.12. Printing Knowledge 3.13. internet browsing/ research 3.14. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 3.15. Trends 3.16. Basic Math 3.17. Geometry	3.1. Artistic and creative skills 3.2. Communication skills 3.3. Computer operation skills 3.4. Reporting skills 3.5. Analytical and comprehension skills 3.6. Software usage skills 3.7. Holistic design skills 3.8. Organizational skills 3.9. Practicing OSHS, EHSM, 3Rs

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Finalize print media design layout	4.1. Comments and feedback from client and/ or supervisor are analyzed to revise the elements of the proposed comprehensive layouts 4.2. Combined elements in the comprehensive layout/ compre are ***imposed*** correctly to suit specified sheet size. 4.3. Numerical sequence and lay down of the product or mock-up is correctly identified to meet binding and finishing requirements. 4.4. Bleed allowance is incorporated in margins and borders. 4.5. Text copy is reviewed for possible errors and omissions and are discussed with client and/ or supervisor. 4.6. Alignment of the basic elements are maintained based on the overall balance of the layout and correct color blends and gradients. 4.7. Hard copy / progressive proof is printed and rechecked for errors, omissions to fit the overall balance of the layout. 4.8. Necessary changes are made, reviewed and proof read as required while comprehensive layout/ compre is still on screen. 4.9. The project and/or work is saved according to ***organizational procedures***. 4.10. A digital proof or ***file format*** is created to present to client and/ or Supervisor for final comments and approval.	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Principles of design 4.5. Elements of design 4.6. Philosophy 4.7. Computer knowledge 4.8. Familiarity in different graphic applications 4.9. Printing Knowledge 4.10. Internet browsing/ research 4.11. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 4.12. Trends 4.13. Basic Math 4.14. Geometry	4.1. Artistic and creative skills 4.2. Communication skills 4.3. Computer operation skills 4.4. Reporting skills 4.5. Analytical and comprehension skills 4.6. Software usage skills 4.7. Holistic design skills 4.8. Organizational skills 4.9. Practicing OSHS, EHSM, 3Rs
5. Prepare final print output & documentation	5.1. Approved final layout design and /or project is prepared for printing. 5.2. ***Correct Color profile*** are selected carefully for standard print output option 5.3. File formats are chosen to best represent artwork styles.	5.1. Verbal communication 5.2. Written communication 5.3. Intellectual property 5.4. Physics 5.5. Elements of	5.1. Artistic and creative skills 5.2. Communication skills 5.3. Computer operation skills 5.4. Reporting skills 5.5. Analytical and

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	5.4. ***Compression options*** are selected that keep the image quality high and the file size low. 5.5. Export options of file are set and saved to the best settings for the final print output. 5.6. The appropriate format for saving the images/ artworks/ objects and layout are used as required in the specifications of the design brief. 5.7. The resolution for effects and any filters are set based on image quality. 5.8. Document / page set up is checked to ensure correct layout file has no non-printable elements. 5.9. Final high-resolution file is checked for final approval of client and/or supervisor before sending to print.	Design 5.6. Principles of design 5.7. Typography 5.8. Computer knowledge 5.9. Familiarity in different graphic applications 5.10. Printing Knowledge 5.11. internet browsing/ research 5.12. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 5.13. Trends 5.14. Basic Math 5.15. Algebra	comprehension skills 5.6. Printing skills 5.7. Software usage skills 5.8. Holistic design skills 5.9. Organizational skills 5.10. Practicing OSHS, EHSM, 3Rs
6. Color separate artwork file for final printing	6.1. The final and approved print media artwork file is prepared for final printing 6.2. The correct format for the color separation is determined and checked based on the final specifications on the design brief. 6.3. ***Command preferences*** are correctly set for print quality and process. 6.4. The ***color separation options*** are set according to print requirements of the design brief. 6.5. Correct Color profile is selected for the final output, based on client specifications. 6.6. ***Screen frequency*** with value & color preferences is selected and saved which is appropriate for the print quality 6.7. Spreads and choke traps are created to avoid misregistration.	6.1. Verbal communication 6.2. Written communication 6.3. Intellectual property 6.4. Principles of design 6.5. Elements of design 6.6. Color Theory 6.7. Typography 6.8. Physics 6.9. Computer knowledge 6.10. Familiarity in different graphic applications 6.11. Printing Knowledge 6.12. Internet reseach/ browsing 6.13. Basic Math 6.14. Geometry 6.15. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 6.16. Trends	6.1. Artistic and creative skills 6.2. Communication skills 6.3. Computer operation skills 6.4. Reporting skills 6.5. Analytical and comprehension skills 6.6. Printing skills 6.7. Software usage skills 6.8. Holistic design skills 6.9. Organizational skills 6.10. Practicing OSHS, EHSM, 3Rs

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	6.8. ***Overprint*** of objects are checked and defined to avoid ink trap. 6.9. A final proof is created, separations checked and completed based on the approved final artwork		

RANGE OF VARIABLES

VARIABLE	RANGE
1. Print media	May include the following : 1.1. Print ads 1.2. Poster 1.3. Banners 1.4. Billboards 1.5. Brochures 1.6. Invitation 1.7. Annual reports 1.8. Flyers / pamphlets 1.9. Menu 1.10. Book / book covers 1.11. Comics 1.12. Magazines 1.13. Callcards etc.
2. design brief	May include the following : 2.1. Project Statement 2.2. Project Objectives 2.3. Variables 2.4. Statistical Interpretation 2.5. Conclusions and Recommendations 2.6. Bibliography / References
3. Relevant personnel	May include : 3.1. Art / creative director 3.2. Supervisor 3.3. Department Head 3.4. Production Manager 3.5. Client
4. Resources	May include : 4.1. Books / magazines 4.2. Internet 4.3. DVDs / Videos 4.4. Photographs 4.5. Graphic Images
5. Approval stages	May include the following stages : 5.1. Draft sketches or design stage 5.2. Comprehensive layout stage 5.3. Final layout stage 5.4. Color separation stage
6. Print format	May include the following format: 6.1. psd 6.2. png 6.3. tiff 6.4. jpeg

VARIABLE	RANGE
7. Materials	May include the following : 7.1. Paper / sketchpad / tracing paper 7.2. Lead & colored pencils 7.3. Colored pens / sign pen 7.4. Markers color palettes 7.5. Paper grade palette 7.6. USB / flash drive 7.7. Watercolor / poster color 7.8. Ruler 7.9. Scissors 7.10. Glue / tape 7.11. Post it 7.12. Design books / magazines
8. Equipment	May include the following : 8.1. Drawing table 8.2. Computer with peripherals 8.3. Chair internet 8.4. Removable hard drive 8.5. Drawing tablet 8.6. Mobile phone 8.7. Camera 8.8. Laptop
9. Software	May include the following : 9.1. Photoshop 9.2. CorelDraw 9.3. InDesign 9.4. Illustrator 9.5. Acrobat 9.6. Sketch up
10. Color scheme	May include the following color scheme tools : 10.1. Color wheel 10.2. Adobe Kuler 10.3. Color Munki 10.4. Colorotate 10.5. Color Calculator 10.6. Copaso : Color Palette software 10.7. Mudcube Color sphere
11. Print palette	May include the following print palette color combinations : 11.1. Cool Color scheme palette 11.2. Warm color scheme palette 11.3. Sweet color scheme palette 11.4. Exotic color scheme palette

VARIABLE	RANGE
12. Appropriate personnel	May include : 12.1. Production Manager 12.2. IT/ software/ network person 12.3. Art / Creative Director 12.4. Supervisor 12.5. Department Head 12.6. Client
13. Document / page set up	May include: 13.1. Margins 13.2. Page size 13.3. Page orientation 13.4. Number of pages 13.5. Multiple columns 13.6. Arrangement of pages 13.7. Pictures/graphics size
14. Graphic design style	May include the following : 14.1. Art Nouveau 14.2. Art Deco 14.3. American Kitsch 14.4. Contemporary 14.5. Grunge 14.6. psychedelic 14.7. Victorian
15. Elements	May include: 15.1. Graphics 15.2. Frames 15.3. Fonts & Texts 15.4. Photographs 15.5. Menus or dialogue boxes 15.6. indexes 15.7. Logos 15.8. Information & details
16. Comprehensive layout / compre	A draft layout/ design used to present to a client/ supervisor which contains either of the following elements : 16.1. Sketches 16.2. Photographs 16.3. Graphic images 16.4. Font / text / messages 16.5. Logos 16.6. Clip art
17. Imposed	May include the following: 17.1. Plug-ins 17.2. Stand alone applications or automated features of high-end page layout programs exist to impose pages

VARIABLE	RANGE
18. Organizational procedures	May include the following: 18.1. Organizational procedures for saving a document can include the preferred format, naming preferences and the location of file is saved to.
19. File format	*May include:* 19.1. PDF 19.2. jpeg 19.3. tiff
20. Correct Color profile	May include the following: 20.1. CMYK color 20.2. Spot colors 20.3. Registration colors 20.4. Pantone color
21. Compression options	May include : 21.1. Lossless 21.2. Lossy
22. Command preferences	May include: 22.1. RGB 22.2. CMYK 22.3. Color management 22.4. Proof options 22.5. Document Information subjects
23. Color separation options	May include the following: 23.1. Process color 23.2. Spot color 23.3. Halftone 23.4. Resolution 23.5. Bleed 23.6. printer marks
24. Screen Frequency	may include the following: 24.1. Common - Mesh counts between 195 and 355 24.2. Halftone – dot frequencies are between 40 and 65 lpi. 24.3. Underbase – use a **195** mesh with a 45 to 50 lpi halftone. 24.4. Black and Highlight – Use **305** to **355** Mesh with 50 to 65 lpi. 24.5. Colors – Use **230** to **305** mesh with 50 to 55 lpi.
25. Overprint	To prevent final print out to come off the printing press with misregistration, the following steps can be used: 25.1. Avoid Touching or Almost Touching Colors 25.2. Use Common Process Colors to Close Gaps 25.3. Overprint Black to Prevent Gaps 25.4. Use Chokes and Spreads to Fill the Gaps 25.5. Overprinting / Surprinting Avoids Need to Trap 25.6. Manual and Automatic Trapping

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted, prepared and developed the document or pages incorporating elements and features that meets the client's design brief 1.2. Demonstrated ability to apply the correct document set up, graphic design style and typography in a comprehensive layout in line with the specifications of the design brief. 1.3. Created a specific print output following organized checking procedures on page orientation, color, layers & separation of elements, resolution and format that is print ready
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. Interview
3. Resources required for assessment	The following must be provided: 3.1. Appropriate supplies and materials 3.2. Applicable equipment & software
4. Context of assessment	4.1. Assessment maybe conducted in the workplace or in a simulated environment

UNIT TITLE: **DEVELOP DESIGNS FOR USER EXPERIENCE**
UNIT CODE: **ICT216315**
UNIT DESCRIPTOR: This unit covers the knowledge, skills and attitude required to incorporate the principles of visual design and communication into the development of designs for user experience.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive and interpret the user experience design brief	1.1. Specifications of the design brief are correctly interpreted and liaised with client and/or Supervisor 1.2. Proposed user experience designs are established and clarified from the relevant personnel. 1.3. Specifications, parameters or constraints are identified based on the design brief 1.4. Information are sourced and evaluated pertinent to the design brief 1.5. User behavior, user goals, user motivations and user needs are researched and compared appropriate to the design brief. 1.6. Relationship between the ***visual elements***, hardware, and software required is identified based on the needs of the design brief 1.7. Research ***media*** and findings are organized and updated as required 1.8. Initial discussions are evaluated, based on the findings against the design brief.	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Behavioral Science 1.5. Human and Animal Anatomy 1.6. Elements of design 1.7. Principles of design	1.1. Communication skills 1.2. Interpersonal skills 1.3. Listening skills 1.4. Critical thinking 1.5. Analytical skills
2. Select media/ materials for user experience design	2.1. Appropriate user behavior, user goals, user motivations and user needs are identified and selected based on the findings of the research. 2.2. Materials, hardware, and software are gathered and sourced based on the requirements 2.3. Non-functioning equipment and materials should be reported to ***relevant personnel***.	2.1. Verbal communication 2.2. Written communication 2.3. Intellectual property 2.4. Behavioral Science 2.5. Elements of design 2.6. Principles of design 2.7. Computer knowledge	2.1. Artistic and creative skills 2.2. Computer application skills 2.3. Computer/ application troubleshooting skills 2.4. Critical thinking 2.5. Analytical skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		2.8. Familiarity in different graphic applications 2.9. Geometry 2.10. Algebra 2.11. Practicing 3Rs –Reduce, Re-use, Recycle/ recover and environmental policies. 2.12. Trends	
3. Produce wireflow designs	3.1. A flow chart is created based on the findings of the research in relation with the design requirements 3.2. ***Clickable links*** are identified based on the flowchart 3.3. Wireflow designs of the selected ***user experience media*** are presented to relevant personnel	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Behavioral Science 3.5. Human and Animal Anatomy 3.6. Elements of design 3.7. Principles of design 3.8. Computer knowledge 3.9. Familiarity in different graphic applications 3.10. Geometry 3.11. Algebra 3.12. Practicing 3Rs –Reduce, Re-use, Recycle/ recover and environmental policies. 3.13. Trends	3.1. Artistic and creative skills 3.2. Computer application skills 3.3. Computer/ application troubleshooting skills 3.4. Critical thinking 3.5. Analytical skills
4. Create page template/ user experience wireframing	4.1. Comments/feedbacks are applied to selected wireflow design 4.2. Page template grid is set based on the ***delivery platform.*** 4.3. Layout is determined using boxes and lines using appropriate software. 4.4. Information hierarchy is defined using ***typography***. 4.5. Visual strength is determined by	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Behavioral Science 4.5. Elements of design 4.6. Principles of	4.1. Artistic and creative skills 4.2. Computer application skills 4.3. Computer/ application troubleshooting skills 4.4. Critical thinking 4.5. Analytical skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	using grayscale tonal values. 4.6. Page template design is evaluated for feedback based on user experience usability, functionality and errors	design 4.7. Typography 4.8. Computer knowledge 4.9. Familiarity in different graphic applications 4.10. Geometry 4.11. Algebra 4.12. Practicing 3Rs –Reduce, Re-use, Recycle/ recover and environmental policies. 4.13. Trends	
5. Finalize wireframe and design flow of the selected user experience media	5.1. Feedbacks and comments are applied to final user experience wireframe and design flow 5.2. When necessary, animation or effects are simulated using motion graphic software and submitted for evaluation 5.3. When necessary, approved design flow is tested using simple coding tools and submitted for evaluation 5.4. Generated designs are organized and submitted to client and /or Supervisor for final approval.	5.1. Verbal communication 5.2. Written communication 5.3. Intellectual property 5.4. Behavioral Science 5.5. Elements of design 5.6. Principles of design 5.7. Typography 5.8. Computer knowledge 5.9. Familiarity in different graphic applications 5.10. Geometry 5.11. Algebra 5.12. Practicing 3Rs –Reduce, Re-use, Recycle/ recover and environmental policies. 5.13. Trends	5.1. Artistic and creative skills 5.2. Computer application skills 5.3. Computer/ application troubleshooting skills 5.4. Critical thinking 5.5. Analytical skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Visual elements	May include the following: 1.1. Colors 1.2. Composition 1.3. Proportion 1.4. Balance 1.5. Framing 1.6. Line 1.7. Texture 1.8. Shape 1.9. Form 1.10. Tone 1.11. Scale 1.12. Movement or animation 1.13. Fonts/typography: 1.13.1. Typeface 1.13.2. Type style 1.13.3. Point/ font size 1.13.4. Tracking 1.13.5. Leading 1.13.6. Kerning
2. media	May include: 2.1. Drawings 2.2. Photographs 2.3. Digital images 2.4. Illustrations 2.5. Videos
3. Relevant personnel	May include the following: 3.1. Creative/art director 3.2. Technical director 3.3. Designers 3.4. Developers/programmers 3.5. Copywriters/editors 3.6. Heads of department 3.7. User/audience/client
4. clickable links	May include: 4.1. Buttons 4.2. Images 4.3. Interactive text
5. User experience media	5.1. Web Page 5.2. Interactive directory 5.3. Interactive menus (resto, banks) 5.4. CD- or DVD menus

VARIABLE	RANGE
	5.5. Mobile or hand-held 5.5.1. Smart phones 5.5.2. Digital Media Players 5.5.3. Tablets 5.5.4. Mobile apps 5.5.5. Smart watches 5.6. Smart TV 5.7. Automotive interfaces 5.8. Visual Presentations (Powerpoint)
6. delivery platform	May include: 6.1. Web 6.2. Mobile apps 6.3. e-learning platform 6.4. Smart watch 6.5. Automotive interface 6.6. Mall directory
7. typography	May include: 7.1. Size 7.2. Font type 7.3. Font style 7.4. Font format

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted user experience requirements based on the design brief. 1.2. Selected appropriate software, tools and delivery platform that best suites the design for the user experience 1.3. Generated and developed wireflow designs for user experience using the appropriate user experience media as required on the design brief 1.4. Created page template/user experience wireframe based on the specifications of the design brief 1.5. Finalized the selected user experience design using the appropriate user experience media
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. Interview
3. Resources required for assessment	The following must be provided: 3.1. Industry-standard hardware (e.g. PC, Mobile Phone or Tablet) and software application 3.2. Design briefs
4. Context of assessment	4.1. Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.

UNIT TITLE : DEVELOP DESIGNS FOR USER INTERFACE
UNIT CODE : ICT216316
UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude required to incorporate the principles of visual design and communication into the development of designs for USER INTERFACE.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive and interpret the user interface design brief	1.1. The proposed ***user interface*** design details and overall work scope is established and clarified from the ***relevant personnel*** 1.2. The specifications, parameters & constraints of the user interface design are identified from the design brief 1.3. Information pertinent to the design brief are sourced and evaluated to create the correct design directives. 1.4. ***Visual elements*** *and* ***tools*** are researched and compared based on the design brief. 1.5. Relationship between the visual elements, hardware and software required is identified based on the project requirements 1.6. Research ***media*** and findings are organized and updated as required 1.7. Initial discussions of the design brief against the findings are evaluated with relevant personnel.	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Behavioral Science 1.5. Human and Animal Anatomy 1.6. Elements of design 1.7. Principles of design 1.8. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 1.9. Trends	1.1. Communication skills 1.2. Interpersonal skills 1.3. Listening skills 1.4. Critical thinking 1.5. Analytical skills
2. Select tools, delivery platform and appropriate software	2.1 Visual elements and tools are identified and presented to the relevant personnel. 2.2 Appropriate visual elements and tools are selected based on the design brief requirements 2.3 Materials, hardware, and software are gathered and sourced based project requirements. 2.4 Non-functioning and missing materials and equipment are reported to ***appropriate personnel***	2.1 Verbal communication 2.2 Written communication 2.3 Intellectual property 2.4 Behavioral Science 2.5 Human and Animal Anatomy 2.6 Elements of design 2.7 Principles of design	2.1 Artistic and creative skills 2.2 Computer application skills computer/ application troubleshooting skills 2.3 Critical thinking 2.4 Analytical skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		2.8 Computer knowledge 2.9 Familiarity in different graphic applications 2.10 Geometry 2.11 Algebra 2.12 Practicing 3Rs – Reduce, Re-use, Recycle/ recover and environmental policies. 2.13 Trends	
3. Generate and develop designs for user interface	3.1. Range of feasible design ideas and creative solutions are generated in response to the design brief. 3.2. Design ideas are discussed and collaborated with relevant personnel. 3.3. ***Brand guidelines*** specified in the design brief are applied to the rough design outputs. 3.4. Creative ideas and solutions are reflected and assessed based on ***constraints*** to meet the design brief. 3.5. User interface design studies in the format required are prepared and submitted to client and /or supervisor for comments and revisions.	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Behavioral Science 3.5. Human and Animal Anatomy 3.6. Elements of design 3.7. Principles of design 3.8. Computer knowledge 3.9. Familiarity in different graphic applications 3.10. Geometry 3.11. Algebra 3.12. Practicing 3Rs – Reduce, Re-use, Recycle/ recover and environmental policies. 3.13. Trends	3.1. Artistic and creative skills 3.2. Computer application skills computer/ application troubleshooting skills 3.3. Critical thinking 3.4. Analytical skills
4. Finalize user interface design	4.1. Comments and feedback from client and/ or supervisor are analyzed to revise the elements of the proposed user interface design. 4.2. Gathered media and content is assembled based on the technical specifications 4.3. Accurate dimensions are	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Behavioral Science 4.5. Human and	4.1. Artistic and creative skills 4.2. Computer application skills computer/ application troubleshooting skills 4.3. Critical thinking

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	considered appropriate to design brief requirements 4.4. Media file size must be considered for accessibility and compatibility 4.5. Media are placed in ***web-based locations*** and external links are generated for fast accessibility 4.6. ***Web safe colors*** are selected based on the media requirements 4.7. ***Standard web fonts*** are considered based on delivery platform requirements 4.8. Selected ***design techniques*** and ***tools*** are applied in developing the design. 4.9. ***Relevant personnel*** are consulted to ensure harmony and compatibility of the design with the technical requirements. 4.10. ***Responsive design*** is considered based on media output 4.11. Final UI design is tested against media output for possible errors	Animal Anatomy 4.6. Elements of design 4.7. Principles of design 4.8. Computer knowledge 4.9. Familiarity in different graphic applications 4.10. Geometry 4.11. Pixels conversion 4.12. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 4.13. Trends	4.4. Analytical Skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. User interface	1.1. Web page 1.2. CD or DVD menu 1.3. Mobile or hand-held 1.3.1. Cellular and Smart phones 1.3.2. Media Players 1.3.3. Tablets 1.3.4. Mobile apps 1.4. TV (traditional and Smart)
2. Relevant personnel	May include the following: 2.1. Creative/art director 2.2. Technical director 2.3. Designers 2.4. Developers/programmers 2.5. Copywriters/editors 2.6. Heads of department 2.7. User/audience 2.8. Other specialist creative and technical staff
3. Visual elements	May include the following: 3.1. Colors 3.2. Composition 3.3. Proportion 3.4. Balance 3.5. Framing 3.6. Line 3.7. Texture 3.8. Shape 3.9. Form 3.10. Tone 3.11. Scale 3.12. Movement or animation 3.13. Fonts/typography: 3.13.1. Typeface 3.13.2. Type style 3.13.3. Point / font size 3.13.4. Tracking 3.13.5. Leading 3.13.6. Kerning
4. Media	May include: 4.1. Drawings 4.2. Photographs 4.3. Digital images 4.4. Illustrations 4.5. Videos

VARIABLE	RANGE
5. Tools	May include design tools such as: 5.1. Adobe Photoshop 5.2. Adobe Illustrator 5.3. Adobe Flash/Animate 5.4. CorelDraw
6. Appropriate personnel	May include: 6.1. IT personnel 6.2. Department head 6.3. Manager 6.4. Supervisor
7. Brand guidelines	May include: 7.1. Style manual 7.2. Style guide 7.3. Brand identifier 7.4. Set of standards
8. constraints	May include: 8.1. Budget 8.2. Timeline 8.3. Technical feasibility and 8.4. Suitability
9. web-based locations	May include: 9.1. Photo bucket 9.2. PIXLR.com 9.3. Cloudinary 9.4. Google drive 9.5. Dropbox
10. web safe colors	May include any of the 216 web safe color codes: (e.g 003300, 330099, CC0000)
11. standard web fonts	May include the ff; 11.1. Helvetica 11.2. Arial 11.3. Times New Roman 11.4. Courier 11.5. Verdana 11.6. Tahoma, etc.
12. responsive design	May include adaptation of the design on the ff media: 12.1. Mobile apps 12.2. Web page 12.3. Smart TV 12.4. Smart watch

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted user interface requirements based on the design brief. 1.2. Selected appropriate software, tools and delivery platform that best suites the design for the user interface 1.3. Generated and developed designs for user interface using the appropriate brand guidelines within the constraints of the design brief 1.4. Finalized user interface design using accurate dimensions and media file size as required in the design brief
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. Interview
3. Resources required for assessment	The following must be provided: 3.1. Industry-standard hardware (e.g. PC, Mobile Phone or Tablet) and software application 3.2. Design briefs
4. Context of assessment	4.1. Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.

UNIT TITLE : DEVELOP DESIGNS FOR PRODUCT PACKAGING
UNIT CODE : ICT216317
UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude required to incorporate the principles of visual design and communication into the development of designs for product packaging.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive and interpret the product packaging design brief	1.1. Instructions & specifications to develop the product packaging are read & analyzed based on the ***design brief*** 1.2. Proposed packaging design is established and clarified from the ***relevant personnel*** to inform design decisions. 1.3. Specifications, parameters or constraints are identified based on the design brief. 1.4. Information are sourced and evaluated pertinent to design brief. 1.5. Current and emerging packaging trends and ideas are considered pertinent to the design brief. 1.6. Nature of the customer, the product, and how the product will be displayed and be distributed are examined pertinent to the brief. 1.7. Key sustainability issues are evaluated for incorporation into design. 1.8. Ideas for technical, creative and budgetary implications are reflected appropriate to the requirements. 1.9. Regulatory requirements that affect packaging design are considered based on the requirements of the design brief.	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Elements of design 1.5. Principles of design 1.6. Form follows function 1.7. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 1.8. Trends	1.1. Computer application skills 1.2. Computer/ application troubleshooting skills 1.3. Critical thinking 1.4. Analytical skills
2. Develop design concepts for specific product packaging	2.1. References to support the design process are identified appropriate to the design brief. 2.2. Design ideas are explored using isometric and orthographic methods. 2.3. Design ideas of the package are generated based on form and function of the product. 2.4. Packaging and color printing	2.1. Verbal communication 2.2. Written communication 2.3. Intellectual property 2.4. Elements of design 2.5. Principles of design 2.6. Spatial reasoning 2.7. Behavioral Science 2.8. Form follows	2.1. Artistic and creative skills 2.2. Computer application skills 2.3. Computer/ application troubleshooting skills 2.4. Critical thinking

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	materials to be used are properly considered based OSHS and EHSM standard. 2.5. Designs developed are organized and submitted in the format required to the client and/or supervisor.	function 2.9. Computer knowledge 2.10. Familiarity in different graphic applications 2.11. Printing Knowledge 2.12. Product packaging materials 2.13. Crafting 2.14. Geometry 2.15. Economics (Pricing) 2.16. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 2.17. Trends	2.5. Analytical skills
3. Create specific product packaging mockup	3.1. Selected design from initial ideas is developed based on production and design factors. 3.2. Selected design is created into a mockup using specified measurements and **t*emporary* package materials** based on the product. 3.3. Package design functionality is tested with collaboration and refinement from relevant personnel. 3.4. Final mockup selected and approved by client and/or supervisor is submitted for approval.	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Behavioral Science 3.5. Spatial Reasoning 3.6. Elements of design 3.7. Principles of design 3.8. Form follows function 3.9. Basic drafting/Technical drawing 3.10. Computer knowledge 3.11. Familiarity in different graphic applications 3.12. Printing Knowledge 3.13. Geometry 3.14. Algebra 3.15. Trigonometry 3.16. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 3.17. Trends	3.1. Artistic and creative skills 3.2. Computer application skills 3.3. Computer/ application troubleshooting skills 3.4. Critical thinking 3.5. Analytical skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Finalize design for specific product packaging	4.1. Modifications and amendments are applied to the final product package design. 4.2. Accurate measurements and ***die line*** are developed to support product packaging design 4.3. Final design, mockup, die line template and ***documentation*** are presented for approval to relevant personnel.	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Behavioral Science 4.5. Spatial Reasoning 4.6. Elements of design 4.7. Principles of design 4.8. Form follows function 4.9. Computer knowledge 4.10. Familiarity in different graphic applications 4.11. Printing Knowledge 4.12. Geometry 4.13. Algebra 4.14. Trigonometry 4.15. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 4.16. Trends	4.1. Artistic and creative skills 4.2. Computer application skills computer/ application troubleshooting skills 4.3. Critical thinking 4.4. Analytical skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Design brief	May include the following : 1.1. Project Statement 1.2. Project Objectives 1.3. Variables 1.4. Statistical Interpretation 1.5. Conclusions and Recommendations 1.6. Bibliography / References
2. Relevant personnel	May include the following: 2.1. creative/art director 2.2. technical director 2.3. designers 2.4. developers/programmers 2.5. copywriters/editors 2.6. heads of department 2.7. client 2.8. buyers/customers 2.9. printers 2.10. other specialist creative and technical staff
3. Temporary package materials	May include: 3.1. Paper 3.2. Plastic 3.3. Cardboard 3.4. Cloth/Canvas
4. Die line	Die line may include: 4.1. Cuts 4.2. Folds 4.3. Holes 4.4. Final layout 4.5. Measurements Score
5. Documentation	May include: 5.1. Orthographic drawings 5.2. Dimensions 5.3. Color specifications 5.4. Final package materials 5.5. Die line package template

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted product-packaging requirements based on the design brief. 1.2. Generated and developed designs of packaging based on the specifications of the product indicated in the design brief 1.3. Created mockup for the selected product package design using appropriate temporary materials 1.4. Finalized the design, mockup, die line template of the product package design.
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. interview
3. Resources required for assessment	The following must be provided: 3.1. Work area 3.2. Industry standard hardware and software application 3.3. Design briefs 3.4. Materials for prototyping
4. Context of assessment	4.1. Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.

UNIT TITLE : DESIGN BOOTH AND PRODUCT WINDOW / DISPLAY
UNIT CODE : ICT216318
UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude required to incorporate the principles of visual design and communication into the design and production of booth and product window displays.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive and interpret the booth & product window / display design brief	1.1. Instructions & specifications to develop the booth & product window /display design is read & analyzed based on the design brief. 1.2. Proposed booth & product window/display design is established and clarified from the ***relevant personnel*** to inform design decisions. 1.3. Specifications, parameters or constraints are identified based on the design brief. 1.4. Information are sourced and evaluated pertinent to design brief. 1.5. Required design ideas and solutions are assessed for implications on budget, timeline, technical feasibility and suitability. 1.6. All relevant questions essential to develop the specific booth & product window / display design is discussed and liaised with relevant personnel.	1.1. Verbal communication 1.2. Written communication 1.3. Intellectual property 1.4. Anthropometrics 1.5. Ergonomics 1.6. Principles of design 1.7. Elements of design 1.8. Drafting/Technical drawing 1.9. Crafting 1.10. Practicing 3Rs – Reduce, Re-use, Recycle/recover and environmental policies. 1.11. Trends	1.1. Communication skills 1.2. Computer application skills 1.3. Computer/ application troubleshooting skills 1.4. Critical thinking 1.5. Analytical skills
2. Develop design concepts for specific booth and product window / display	2.1. References to support the design process are identified appropriate to the design brief. 2.2. Design ideas are explored using isometric and orthographic methods. 2.3. Ideas for design concepts are generated through research and observation of structures and window displays. 2.4. Different design style options are explored and sketched based on the design parameters. 2.5. ***Brand guidelines*** specified in the design brief are	2.1. Verbal communication 2.2. Written communication 2.3. Intellectual property 2.4. Elements of design 2.5. Principles of design 2.6. Anthropometrics 2.7. Ergonomics 2.8. Form follows function 2.9. Computer knowledge 2.10. Familiarity in different graphic applications 2.11. Architecture and Interior Design	2.1. Artistic and creative skills 2.1.1. Drawing and sketching 2.1.2. 3D design techniques 2.2. Computer application skills 2.3. Computer/ application troubleshooting skills 2.4. Critical thinking 2.5. Analytical skills 2.6. Holistic skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	applied to the rough design outputs. 2.6. ***Location*** or ***space guidelines*** of the product window / display is noted and measured to the design specifications. 2.7. Final rough designs in the format required are prepared and submitted to relevant personnel for comments and revisions.	2.12. Basic Carpentry and Electrical Installation 2.13. Trends 2.14. Geometry 2.15. Algebra 2.16. Trigonometry	
3. Finalize selected design using precise specifications provided	3.1. Comments and feedback from client and/ or supervisor are collected & analyzed to revise and edit the chosen design concept. 3.2. ***Multi-view Orthographic drawings*** of the selected design are provided for arrangement & construction reference. 3.3. Booth or product window/ display size and dimensions are accurately indicated on the final design. 3.4. ***Materials & specifications*** and construction items to be used on the final output are identified and indicated over the design parts. 3.5. Brand guidelines should be clearly seen on the final booth design, as required in the design brief. 3.6. A plan of the ***utilities location and installation*** should be clearly indicated in the final booth & product window/ display design, in coordination with relevant personnel. 3.7. Final design with proper documentation of the design details are prepared and submitted to client and/or supervisor for final approval.	3.1. Verbal communication 3.2. Written communication 3.3. Intellectual property 3.4. Elements of design 3.5. Principles of design 3.6. Anthropometrics 3.7. Ergonomics 3.8. Form follows function 3.9. Computer knowledge 3.10. Familiarity in different graphic applications 3.11. Architecture and Interior Design 3.12. Basic Carpentry and Electrical Installation 3.13. Geometry 3.14. Algebra 3.15. Trigonometry	3.1. Artistic and creative skills 3.2. Computer application skills 3.3. Computer application troubleshooting skills 3.4. Critical thinking 3.5. Analytical skills 3.6. Holistic skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Produce 3D Model images/ view of the approved booth or product/ window display design	4.1. Approved final booth design is created into a precise colored ***3D model images*** based on the multi-view orthographic drawings. 4.2. Brand, logo, color of overall 3D model images are fully seen and reflected based on the approved final design & requirements. 4.3. Structure and functionality are indicated with collaboration and refinement with relevant personnel. 4.4. Required materials needed for the design are researched and indicated based on approved design documentation & structure plan. 4.5. Any electrical, lighting and other important utilities are indicated, and/or consulted with relevant personnel 4.6. Final design, colored images of 3D model and documentation are presented for approval by relevant personnel.	4.1. Verbal communication 4.2. Written communication 4.3. Intellectual property 4.4. Elements of design 4.5. Principles of design 4.6. Anthropometrics 4.7. Ergonomics 4.8. Form follows function 4.9. Computer knowledge 4.10. Familiarity in different graphic applications 4.11. Architecture and Interior Design 4.12. Basic Carpentry and Electrical Installation 4.13. Geometry 4.14. Algebra 4.15. Trigonometry	4.1. Artistic and creative skills 4.2. Computer application skills 4.3. Computer/ application troubleshooting skills 4.4. Critical thinking 4.5. Analytical skills 4.6. Holistic skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Design brief	May include the following : 1.1. Project Statement 1.2. Project Objectives 1.3. Variables 1.4. Statistical Interpretation 1.5. Conclusions and Recommendations 1.6. Bibliography **/ References**
2. Relevant personnel	May include the following: 2.1. Creative/art director 2.2. Technical director 2.3. Head designer 2.4. Carpenters 2.5. Architect 2.6. Department head 2.7. Client 2.8. Utility Head 2.9. Location / Venue Manager
3. Brand guidelines	May include: 3.1. Standards 3.2. Signage 3.3. Brand identifier 3.4. Logo colors
4. Location or space guidelines	May include: 4.1. Space dimensions 4.2. Obstacles 4.3. Location of electrical outlet 4.4. Design style 4.5. Design constraints 4.6. Material constraints 4.7. Utilities constraints
5. Multi-view Orthographic drawings	May include : 5.1. Top view 5.2. Front view 5.3. Back view 5.4. Left side view 5.5. Right side view
6. Materials & specifications	May include the following: 6.1. Styrofoam 6.2. Tarpaulin 6.3. Electrical gadgets 6.4. Neon lights 6.5. Digital displays 6.6. Metallic materials 6.7. Wood materials 6.8. Plastic materials 6.9. Glass materials

VARIABLE	RANGE
	6.10. Actual product being displayed 6.11. Mannequins 6.12. Papers/cardboards 6.13. Textiles 6.14. Organic materials 6.15. Panel systems
7. Utilities location & installation plan	May include the following: 7.1. Outlet location 7.2. Electrical set up plan 7.3. Pipe location plan 7.4. Air-conditioner / fan location 7.5. Light location 7.6. Sink location 7.7. Faucet location 7.8. Gas location & set up
8. 3D Model images	May include the following: 8.1. 3D front view 8.2. 3D side view 8.3. 3D isometric view 8.4. 3D aerial view 8.5. 3D back view *** This is executed in either 2D drawing, vector drawing or 3D software images.

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment must show that the candidate: 1.1. Interpreted booth & product window/display design requirements based on the design brief. 1.2. Generated and developed designs of booth & product window/display based on the specifications of the brand guidelines and space guidelines indicated in the design brief 1.3. Finalized the design of booth & product window/display using accurate measurements and materials used. 1.4. Created a precise colored 3D model images based on the multi-view orthographic drawings for the selected booth & product window/display design using appropriate materials.
2. Method of assessment	The assessor must assess the candidate through the ff: 2.1. Demonstration with oral questioning 2.2. Interview
3. Resources required for assessment	The following must be provided: 3.1. work area 3.2. Industry standard hardware and software application 3.3. Design brief
4. Context of assessment	4.1. Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.

SECTION 3 TRAINING STANDARDS

These standards are set to provide the technical and vocational education and training (TVET) providers with information and other important requirements to consider when designing training programs for **Visual Graphic Design NC III**.

They include information on curriculum design; training delivery; trainee entry requirements; tools and equipment; training facilities; and trainer's qualification.

3.1 CURRICULUM DESIGN

TESDA shall provide the training on the development of competency-based curricula to enable training providers develop their own curricula with the components mentioned below.

Delivery of knowledge requirements for the basic, common and core units of competency specifically in the areas of mathematics, science/technology, communication/language and other academic subjects shall be contextualized. To this end, TVET providers shall develop a Contextual Learning Matrix (CLM) to include green technology, issues on health and drugs and catering to persons with disabilities (PWD's) to accompany in their curricula.

Course Title**:** **VISUAL GRAPHIC DESIGN** NC Level: **NC III**

Nominal Training Duration:

	68 hrs	Basic Competencies
	28 hrs	Common Competencies
	405 hrs	Core Competencies
Total	**501 hrs**	

Course Description:

This course is designed to develop & enhance the knowledge, skills, & attitudes of a Visual Graphic Design Provider in accordance with industry standards. It covers the basic & common competencies in addition to the core competencies such as to develop designs for logo, develop designs for print media, develop designs for user interface and user experience as well as develop designs for product packaging and booth & product window display.

The nominal duration of 501 hours covers the required units at Visual Graphic Design NC III. TVET providers can however, offer a longer, ladderized course covering the NC III basic, common and core units.

To obtain this, all units prescribed for this qualification must be achieved:

BASIC COMPETENCIES
(68 hrs)

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

1. Lead workplace c**om**munication	1.1. Communicate information about workplace processes	• Lecture and discussion on:
		  ○ Effective verbal communication methods
		  ○ Sources of information
		• Practice organizing information
		• Identify organization requirements for written and electronic communication methods
		• Follow organization requirements for the use of written and electronic communication methods
		• Perform exercises on understanding and conveying intended meaning scenario
			• Lecture
			• Demonstration
			• Practical exercises
			• Demonstration
			• Role Play
				• Written Test
				• Observation
					2 Hours

	1.2. Lead workplace discussions	• Lecture and discussion on:
		  ○ Organizational policy on production, quality and safety
		  ○ Goals/ objectives and action plan setting
		• Read effective verbal communication methods
		• Prepare/set action plans based on organizational goals and objectives
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written Test
				• Observation
					2 Hours

	1.3. Identify and communicate issues arising in the workplace	• Lecture and discussion on: ○ Organizational policy in dealing with issues and problems • Read effective verbal communication methods • Practice organizing information • Perform exercises on understanding and conveying intended meaning scenario	• Group discussion • Lecture • Demonstration • Role Play	• Oral evaluation • Written Test • Observation	2 Hours
2. Lead small team	2.1. Provide team leadership	• Lecture and discussion on: ○ Company policies and procedures • Identify client expectations • Practice team building skills • Perform exercises on communication skills required for leading teams	• Group discussion • Lecture • Demonstration • Role Play	• Oral evaluation • Written examination • Observation	2 Hours
	2.2. Assign responsibilities	• Lecture and discussion on: ○ Team member's duties and responsibilities • Identify client expectations	• Group discussion • Lecture	• Oral evaluation • Written	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Practice negotiating skills • Perform group exercises showing the skills and techniques in promoting team building	• Demonstration • Role Play	examination • Observation	
	2.3. Set performance expectations for team members	• Lecture and discussion on: o Team member's duties and responsibilities o How performance expectations are set • Identify client expectations • Perform group exercises in setting individual target/ expectation • Read instruction and requirements in up to date dissemination to members	• Group discussion • Lecture • Demonstration • Role Play	• Oral evaluation • Observation • Written examination	2 Hours
	2.4. Supervise team performance	• Discuss listening and treating individual team members concern • Identify methods of Monitoring Performance • Perform group exercises showing the skills in monitoring team performance	• Group discussion • Lecture • Demonstration	• Oral evaluation • Written examination • Observation	2 Hours
3. Develop and practice negotiation skills	3.1. Plan negotiations	• Lecture and discussion on: o codes of practice and guidelines for the organization o differences between content and process • Read: o Organizations policy and procedures for negotiations o Decision making and conflict resolution strategies procedures o Strategies to manage conflict o Steps in negotiating process • Identify bargaining information • Apply strategies to manage process • Apply steps in negotiating process	• Group Discussion • Lecture • Demonstration	• Oral evaluation • Written examination • Observation	4 hours
	3.2. Participate in negotiations	• Discuss/Describe the following strategies during negotiation: o Decision making and conflict resolution strategies procedures o Problem solving strategies on how to deal with	• Group Discussion • Case studies • Demonstration • Simulation/ Role	• Oral evaluation • Observation	4 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

		unexpected questions and attitudes during negotiation
		• Practice the following scenarios in a group activity:
		  ○ Perform interpersonal skills to develop rapport with other parties
		  ○ Perform verbal communication and listening skill
		  ○ observation skills
		  ○ negotiation skills
		• Describe the Procedure in documenting negotiations
		• Apply a filing system in managing information
		• Demonstrate filing of documents
			play		

4. Solve workplace problems related to work activities	4.1. Identify the problem	• Discussion on Normal operating parameters & product quality
		• Identify & clarify the nature of problem
		• Read:
		  ○ Brainstorming
		  ○ Cause and effect diagrams
		  ○ PARETO analysis
		  ○ SWOT analysis
		  ○ GANT chart
		  ○ PERT CPM & graph
		  ○ SCATTERGRAMS
		• Apply observation, investigation and analytical techniques in solving problem in the workplace
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

	4.2. Determine fundamental cause of the problem	• Discussion on Teamwork and work allocation problem
		• Read:
		  ○ Using range of formal problem solving techniques
		  ○ Enterprise goals, targets and measures
		  ○ Enterprise quality, OHS and environmental requirement
		  ○ Non-routine process and quality problems
		• Perform group exercises showing safety in emergency situations and incidents
		• Identify & clarify the nature of problem
		• Select relevant equipment and operational processes
			• Group discussion
			• Lecture
			• Demonstration
			• Role Play
				• Oral evaluation
				• Written examination
				• Observation
					2 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	4.3. Determine correct / preventive action	• Discussion on principles of decision making strategies and techniques
		• Read:
		  ○ Evaluating the solution
		  ○ Devising the best solution
		• Perform group exercise how to implement the developed plan to rectify a problem
			• Group Discussion
			• Lecture
			• Demonstration
			• Role Play
				• Oral evaluation
				• Written examination
				• Observation
					2 Hour

	4.4. Provide recommendation to manager	• Discuss industry codes and standards • Apply enterprise information systems and data collation • Prepare recommendation letter	• Group Discussion • Demonstration	• Oral evaluation • Observation	2 Hour

5. Use mathematical concepts and techniques	5.1. Identify mathematical tools and techniques to solve problems	• Discussion on the four fundamental operation (addition, subtraction, division, multiplication)
		• Read:
		  ○ Measurement system
		  ○ Precision and accuracy
		  ○ Basic measuring tools/devices
		• Apply mathematical computations
		• Demonstrate activities on:
		  ○ Use of calculator
		  ○ Use of different measuring tools
			• Group Discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hour

	5.2. Apply mathematical procedures / solution	• Lecture and discussion on:
		  ○ Estimation
		  ○ Problem-based questions
		  ○ Mathematical techniques
		• Apply mathematical computations
		• Demonstrate activities on:
		  ○ Use of calculator
		  ○ Use of different measuring tools
		  ○ Use of mathematical tools and standard formulas
			• Lecture
			• Demonstration
			• Simulation/ Role play
				• Written examination
				• Observation
					4 Hours

	5.3. Analyze results	• Discussion on the four fundamental operation (addition, subtraction, division, multiplication)
		• Read:
		  ○ Measurement system
		  ○ Precision and accuracy
			• Group Discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		○ Basic measuring tools/devices • Apply mathematical computations • Demonstrate activities on: ○ Use of calculator ○ Use of different measuring tools			
6. Use relevant technologies	6.1. Identify appropriate technology	• Discussion on company policy in relation to relevant technology • Read: ○ Awareness on technology and its function ○ Relevant technology application/ implementation ○ Operating instructions • Practice basic communication skill in a group activity	• Group Discussion • Lecture • Demonstration • Simulation/ Role Play	• Oral evaluation • Written examination • Observation	2 Hour
	6.2. Apply relevant technology	• Discussion on different management concepts • Read: ○ Relevant technology application/ implementation ○ Technology adaptability ○ Different management concepts ○ Health and safety procedure ○ Communication techniques ○ Apply software applications skills • Practice drills on installing application software • Practice basic communication skill in a group activity	• Group Discussion • Lecture • Demonstration • Simulation/ Role Play	• Oral evaluation • Written examination • Observation	4 Hours
	6.3. Maintain/ enhance relevant technology	• Lecture and discussion on: ○ Repair and maintenance procedure ○ Operating instructions • Practice drills: ○ Installing application software ○ Basic troubleshooting skills	• Lecture • Demonstration • Simulation/ Role Play	• Written examination • Observation	2 Hours
7. Apply critical thinking and problem solving techniques in the workplace	7.1. Identify the problem	• Lecture and discussion on ○ Processes, normal operating parameters, and product quality to recognize nonstandard situations ○ Enterprise goals, targets and measures ○ Analytical techniques	• Lecture • Group Discussion	• Oral evaluation • Written Examination	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		○ Types of problems			
	7.2. Determine fundamental causes of the problem	• Lecture and collaboration on ○ Root cause of the problem ○ Problem solving tools • Exercise on cause and effect	• Lecture • Group Discussion	• Oral evaluation • Written Examination	2 Hours
	7.3. Determine corrective action	• Lecture and discussion on ○ Identification and analysis of possible options for problem resolution ○ Corrective actions ○ Principles of decision making strategies and techniques • Layouting of action plans	• Lecture • Group Discussion	• Oral evaluation • Written Examination • Observation	2 Hours
	7.4. Provide recommendation/s to manager	• Using range of formal problem solving techniques • Preparation and presentation of sample recommendation report	• Lecture • Group Discussion	• Oral evaluation • Written Examination • Presentation	2 Hours
8. Use information creatively and critically	8.1. Use technical information systems and information technology	• Lecture and discussion on: ○ Application in collating information ○ Procedures for inputting, maintaining and archiving information ○ Guidance to people who need to find and use information • Organizing information into a suitable form for reference and use • Classify stored information for identification and retrieval • Operate the technical information system by using agreed procedures	• Lecture • Group Discussion • Hands on • Demonstration	• Oral evaluation • Written Examination • Presentation	4 Hours
	8.2. Apply information	• Lecture and discussion on: ○ Attributes and limitations of available software tool	• Lecture • Group	• Oral evaluation	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	technology (IT)	○ Procedures and work instructions for the use of IT ○ Operational requirements for IT systems ○ Sources and flow paths of data ○ Security systems and measures that can be used ○ Methods of entering and processing information • Use procedures and work instructions for the use of IT • Extract data and format reports • Use WWW applications	Discussion • Self-paced handout/ module • Hands on • Demonstration	• Written Examination • Presentation	
	8.3. Edit, format and check information	• Lecture and discussion on: ○ Basic file-handling techniques ○ Techniques in checking documents ○ Techniques in editing and formatting ○ Proof reading techniques • Use different techniques in checking documents • Edit and format information applying different techniques • Proof read information applying different techniques	• Lecture • Group Discussion • Self-paced handout/ module • Hands on • Demonstration	• Oral evaluation • Written Examination • Presentation	2 Hours
9. Work in a diverse environment	9.1. Develop an individual's cultural awareness and sensitivity	• Lecture and discussion on: ○ Enterprise policies and core values ○ Awareness on individual cultures and world geography ○ Different methods of verbal and non-verbal communication in a multicultural setting ○ Workplace Diversity Policy	• Lecture • Group Discussion	• Oral evaluation • Written Examination • Presentation	2 Hours
	9.2. Work effectively in an environment that acknowledges and values cultural diversity	• Lecture and discussion on: ○ The value of diversity in the economy and society in terms of Workforce development ○ Innovation ○ Social justice ○ Customer service excellence ○ Teamwork and collaboration • Applying strategies for customer service excellence	• Lecture • Group Discussion	• Oral evaluation • Written Examination • Presentation	2 Hours
	9.3. Identify	• Lecture and discussion on:	• Lecture	• Oral	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	common issues in a multicultural and diverse environment	○ Diversity-related conflicts within the workplace ○ Change management policies ○ Advance strategies for customer service excellence • Identifying and addressing workplace harassment • Applying advance strategies for customer service excellence	• Group Discussion	evaluation • Written Examination • Presentation	

Note: Basic competencies may be embedded in the core competencies.

COMMON COMPETENCIES
28 hrs

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
1. Apply Quality Standards	1.1. Assess quality of received materials	• Identify relevant production processes, materials and products • Study and interpret characteristics of materials, software and hardware used in production processes • Perform quality checking procedures • Apply quality Workplace procedures • Identify faulty materials • Check quality of materials or component parts as per manufacturer's standards • Interpret specifications or symbols	• Lecture • Field trip • Symposium • Video clips • Simulation/ Role playing	• Written test • Demonstration & questioning • Observation & questioning	3 hours
	1.2. Assess own work	• Perform workplace procedure in documenting completed work • Perform fault identification and reporting • Observe safety and environmental aspects of production processes • Utilize workplace quality indicators • Document and report deviations from specified quality standards	• Field trip • Symposium • Simulation • On the job training	• Demonstration & questioning • Observation & questioning	3 hours
	1.3. Engage in quality improvement	• Participate in quality improvement processes a. IEC/ISO standards b. Environmental and safety standards • Carry out work as per process improvement procedures • Monitor operation performance • Implement continuous improvement	• Field trip • Symposium • Simulation • On the job training	• Demonstration & questioning • Observation & questioning	2 hours
2. Perform Computer	2.1. Plan and prepare for task to be	• Plan and prepare computer operation activity • Determine task requirements based on	• Lecture • Modular	• Written/Oral examination	4 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
Operations	undertaken	required output • Determine appropriate hardware and software • Identify/Select types of computers and basic features of different operating systems • Interpret and follow client-specific guidelines & procedures • Plan task as per data security guidelines	• Computer based training (e-learning) • Project method • On the job training	• Practical demonstration	
	2.2. Input data into computer	• Apply basic ergonomics of keyboard and computer user • Enter/Encode data using appropriate computer programs/applications • Check accuracy of encoded data/information per SOP • Save and store inputted data in storage media • Discuss storage devices and basic categories of memory • Identify and define relevant types of software	• Lecture • Modular • Group discussion • Project method • On the job training	• Written/Oral examination • Practical demonstration	4 hour
	2.3. Access information using computer	• Select correct program/ application based on job requirements • Access computer data/files • Interpret general security, privacy legislation & copyright • Use Productivity Application o Microsoft office applications • Learn Business Application o Introduction to Basic Programming software • Apply basic ergonomics of keyboard and computer user	• Lecture • Computer based training (e-learning) • On the job training	• Written/Oral examination • Practical demonstration	5 hours
	2.4. Produce/output data using computer system	• Identify types and function of computer peripheral devices • Print and scan office documents and materials • Send office/ business documents through facsimile	• Lecture • Group discussion • Modular • On the job training	• Written/Oral examination • Practical demonstration	5 hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

		• Transfer files or data between compatible systems using computer software, hardware/ peripheral devices
		• Save documents in storage devices
		  o CD/DVD
		  o USB drives
		  o Hard disk drives			

	2.5. Maintain computer equipment and systems	• Perform computer equipment/ system basic maintenance procedures
		  o Perform basic file maintenance procedures
		  o Perform cleaning of PC parts/ hardware components
		  o Scan/Debug computer software and applications
		  o Perform cleaning and defragmentation of computer files
		  o Perform backup of computer files
		• Enumerate and define different types of computer viruses
			• Demonstration
			• Simulation
			• Modular
			• Video clips
			• Computer based training (e-learning)
				• Written/Oral examination
				• Practical demonstration
					2 hours

CORE COMPETENCIES

(405)

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration
1. Develop designs for a logo 56 hrs	1.1. Receive and interpret the logo design brief	• Discuss the elements of a Design Brief • Interpret and determine the project requirements based on the design brief • Conduct research on client/company culture, people, target audience and trends • Discuss working against the mood • Plan tasks following design brief specifications	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	4 hours
	1.2. Select materials & equipment to develop logo design	• Identify/Select appropriate hardware and software needed to accomplish the tasks • Discuss the different industry standard vector software • Discuss different types of media applications	• Lecture/ Discussion • Actual demonstration	• Written exam • Practical Exam • Interviews / • Questioning	4 hours
	1.3. Develop logo design concepts	• Discuss: ○ Elements of design ○ Principles of design • Perform initial drawings/sketches for the logo • Select the best design among the sketches	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	16 hours
	1.4. Edit / Revise logo design	• Discuss: ○ Tools and techniques using an industry standard vector software ○ Difference between Vector and Raster images • Revise logo design based on the logo concepts and client feedback	• Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	24 hours
	1.5. Finalize logo design	• Discuss*:* ○ Different logo applications ○ Different file format requirements • Finalize logo design and test on different media applications	• Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	8 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration
2. Develop designs for print media 72 hrs	2.1. Interpret and analyze the print media design brief	• Discuss: ○ Different types of print media ○ Relevance of schedule and milestones ○ Different type of print formats • Conduct research appropriate to design specifications of the brief	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	8 hours
	2.2. Prepare equipment & materials for print media design	• Discuss: ○ Different Industry standard Raster software ○ Monitor calibration ○ Different color palettes ○ Tools and techniques used in raster software ○ Importance of Shortcut keys • Identify and select appropriate hardware and software needed to perform task • Perform Monitor calibration and organizing color palettes • Select appropriate page settings based on the brief	• Lecture/ Discussion • Actual demonstration	• Written exam • Practical Exam • Interviews / • Questioning	16 hours
	2.3. Develop designs for the specific print media output	• Conduct planning and research • Apply appropriate page set up based on brief requirements • Discuss: ○ Graphic design styles ○ Importing and exporting from other software ○ RGB and CMYK • Perform design concepts by arranging elements using software	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	16 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	2.4. Finalize print media design layout	• Discuss and perform:
		  ○ Producing a print mockup
		  ○ Bleeding
		  ○ Printing settings and techniques
		• Apply final revisions based on client feedback
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					16 hours

	2.5. Prepare final print output & documentation	• Discuss and perform:
		  ○ Color processing
		  ○ Different file formats
		  ○ Compression options
		  ○ Different print effects and filters
		• Save and export final design for presentation
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					8 hours

	2.6. Color separate artwork file for final printing	• Discuss and perform:
		  ○ Color separation
		  ○ Process and spot colors
		  ○ Screen frequency
		  ○ Spread and choke traps
		  ○ Overprints
		• Create proof of final approved design
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					8 hours

3. Develop designs for user interface 60 hrs	3.1. Receive and interpret the client brief	• Identify design brief, and creative and technical requirements including product specifications and references with relevant personnel. • Identify and prepare all necessary equipment and required peripherals to be used according to task to be undertaken.	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	4 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	3.2. Select tools, delivery platform and appropriate software	• Discuss: ○ Types of User Interface ○ Different Software for User Interface design • Identify and select appropriate hardware and software needed to perform task • Select appropriate page settings based on the brief	• Lecture/ Discussion • Actual demonstration	• Written exam • Practical Exam • Interviews / • Questioning	16 hours
	3.3. Generate and develop designs for user interface	• Discuss: ○ Brand guidelines ○ Target audience ○ Trends ○ Grid specifications • Design user interface thru sketches	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	24 hours
	3.4. Finalize user interface design	• Discuss: ○ External Links to Web-based locations ○ Different media and file sizes ○ Web-safe colors ○ Standard web fonts	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	16 hours
4. Develop designs for user experience 79 hrs	4.1. Receive and interpret the client brief	• Identify design brief, and creative and technical requirements including product specifications and references with relevant personnel. • Identify and prepare all necessary equipment and required peripherals to be used according to task to be undertaken.	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	4 hours
	4.2. Select media/ materials for user experience design	• Discuss: ○ Importance of User behavior, goals, motivation and needs ○ Difference of UI and UX design ○ Different software for UX design	• Lecture/ Discussion • Actual demonstration	• Written exam • Practical Exam • Interviews / Questioning	16 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	4.3. Produce mockup of screen flow	• Discuss:
		  ○ Design flow
		  ○ Clickable links
		  ○ Testing interactivity
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					15 hours

	4.4. Create Page template (***wireframing)***	• Discuss:
		  ○ Grid specifications
		  ○ Wireframing techniques
		  ○ Media testing
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					16 hours

	4.5. Create page template/ user experience wireframing	• Discuss:
		  ○ Presenting UX with motion graphic software
		  ○ Presenting UX using code
		• Refine the interactive and presentation media based on client feedback.
		• Identify clearly and store securely all designs and applications in accordance with company procedures.
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					20 hours

	4.6. Finalize wireframe and design flow of the selected user experience media	• Discuss:
		  ○ Using After Effects for presenting animation
		  ○ Simple coding for web and apps
		• Submit final design flow
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					8hours

5. Develop designs for product packaging	5.1. Receive and interpret the brief	• Identify design brief, and creative and technical requirements including product specifications and references with relevant personnel. • Identify and prepare all necessary equipment and required peripherals to be used according to task to be undertaken.	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	4 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration

68 hrs	5.2. Develop design concepts for specific product packaging	• Identify client's/company's logo brand specifications
		• Identify
		  ○ Discuss:
		  ○ Form follows function
		  ○ Spatial Reasoning
		  ○ Types of packaging
		  ○ Drafting techniques
		  ○ Safety standards
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					24 hours

	5.3. Create specific product packaging mockup	• Identify and select appropriate industry standard vector or raster software including computer-assisted techniques for sustainability.
		• Discuss:
		  ○ Form follows function
		  ○ Spatial Reasoning
		  ○ Types of packaging
		  ○ Packaging Printing specifications
		  ○ What is a die line?
		• Create package design based on the design brief, product specifications and company brand specification, within the die line.
		• Arrange the layout of the design within the boundaries of the die line.
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					24 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	5.4. Finalize design for specific product packaging	• Identify and select appropriate industry standard 3Dsoftware including computer-assisted techniques for sustainability.
		• Discuss:
		  ○ 3D software tools and techniques
		  ○ Create a die line of the package
		• Create 3D model using industry standard software based on the prototype and brief requirements.
		• Place layout design on to the 3D model.
		• File save and export
		• Print and cut the layout design with die line.
		• Assemble the final package design.
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					16 hours

6. Design booth and product/ window display 70 hrs	6.1. Receive and interpret the brief	• Identify design brief, and creative and technical requirements including product specifications and references with relevant personnel. • Identify and prepare all necessary equipment and required peripherals to be used according to task to be undertaken.	• Lecture • Discussion • Viewing Multimedia • Actual demonstration	• Written exam • Interviews / • Questioning	4 hours
	6.2. Develop design concepts for specific booth and product window / display	• Discuss: • Anthrometrics and Ergonomics • Design styles • Space guidelines • Form follows functions • Architecture • Interior design	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	24 hours

Unit of Competency	Learning Outcome	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	6.3. Finalize selected design using precise specifications provided	• Discuss:
		  ○ Drafting
		  ○ Materials
		  ○ Utilities for booths
		• Identify range of materials needed in the construction of the booth
		• Identify lighting and electrical wiring of the booth.
		• Identify dimensions of the booth
		• create Multi-view Orthographic drawings of the selected design for arrangement & construction reference.
			• Lecture/ Discussion
			• Practical exercises
			• Simulation
			• Demonstration
				• Observation
				• Practical demonstration
				• Oral questioning
					24 hours

	6.4. Produce colored 3D model images & views of the approved booth or product/ window display design	• Discuss: ○ Scale modelling • Identify and select appropriate industry standard software including computer-assisted techniques for sustainability. • Create a precise colored 3D model images.using industry standard software based on the based on the approved multi-view orthographic drawings • File save and export • Identify and select materials that is appropriate for the design of the model. • Create a layout of each section scaled down to appropriate size based on the design specifications. • Print each view of the colored 3D images created.	• Lecture/ Discussion • Practical exercises • Simulation • Demonstration	• Observation • Practical demonstration • Oral questioning	18 hours

3.2 TRAINING DELIVERY

1. The delivery of training shall adhere to the design of the curriculum. Delivery shall be guided by the principles of competency-based TVET.

    - Course design is based on competency standards set by the industry or recognized industry sector; (**Learning system is driven by competencies written to industry standards**)
    - Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies;
    - Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology.
    - Assessment is based in the collection of evidence of the performance of work to the industry required standards;
    - Assessment of competency takes the trainee's knowledge and attitude into account but requires evidence of actual performance of the competency as the primary source of evidence.
    - Training program allows for recognition of prior learning (RPL) or current competencies;
    - Training completion is based on satisfactory completion of all specified competencies not on the specified nominal duration of learning.

2. The competency-based TVET system recognizes various types of delivery modes, both on-and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities and their variations/components may be adopted singly or in combination with other modalities when designing and delivering training programs:

    2.1 **Institution- Based:**

    - Dual Training System (DTS)/Dualized Training Program (DTP) which contain both in-school and in-industry training or fieldwork components. Details can be referred to the Implementing Rules and Regulations of the DTS Law and the TESDA Guidelines on the DTP;

    - Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video, computer technologies or other modern technology that can be used to facilitate learning and formal and non-formal training. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

    - The traditional classroom-based or in-center instruction may be enhanced through use of learner-centered methods as well as laboratory or field-work components.

2.2 **Enterprise-Based:**

- Formal Apprenticeship – Training within employment involving a contract between an apprentice and an enterprise on an approved apprenticeable occupation.

- Informal Apprenticeship - is based on a training (and working) agreement between an apprentice and a master craftsperson wherein the agreement may be written or oral and the master craftsperson commits to training the apprentice in all the skills relevant to his or her trade over a significant period of time, usually between one and four years, while the apprentice commits to contributing productively to the work of the business. Training is integrated into the production process and apprentices learn by working alongside the experienced craftsperson.

- Enterprise-based Training - where training is implemented within the company in accordance with the requirements of the specific company. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

2.3 **Community-Based:**

- Community-Based Training – short term programs conducted by non-government organizations (NGOs), LGUs, training centers and other TVET providers which are intended to address the specific needs of a community. Such programs can be conducted in informal settings such as barangay hall, basketball courts, etc. These programs can also be mobile training program (MTP).

3.3 TRAINEE ENTRY REQUIREMENTS

Trainees or students should possess the following requirements:

- Must have completed at least 10 yrs. basic education or an alternative learning systems (ALS) certificate of completion with grade 10 equivalent holder
- Must have drawing and drafting skills
- can communicate either oral and written;
- Must have computer operation skills and at least 1 graphic software knowledge and skills
- must pass the aptitude and artistic/talent determination test given by the institution

This list does not include specific institutional requirements such as educational attainment, appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.

3.4 LIST OF TOOLS, EQUIPMENT AND MATERIALS

Recommended list of tools, equipment and materials for the training of 20 trainees for Visual Graphic Design – NC III

TOOLS		EQUIPMENT		MATERIALS	
Qty	Description	Qty	Description	Qty	Description
21	May include any of the following OS: - Windows - Mac - Linux - ubuntu	21	Computer (software dependent specifications) with at least 18" monitor	10	Reference Book
		21	Ergonomic computer tables and chairs	21	Adobe PDF documents
		1	LCD Projector	21	Hand-outs
		1	Printer, color (DeskJet or laser)	50	CD's CD ROMs DVDs
21	Internet Browsers (Google Chrome, Internet Explorer, Mozilla Firefox)	1	Scanner	10	Practice materials
		1	Digital Camera	10	Print media
		1	Monitor calibrator (optional)	1	Internet
21	Must have any of the following graphic software applications* such as: - Adobe Photoshop - Adobe Illustrator - Adobe In-design - Adobe Premiere - Adobe After Effects - Adobe Acrobat - CorelDraw - Gimp - Microsoft PowerPoint - Microsoft Publisher - Adobe Flash/Animate - Adobe Dreamweaver - 3D software application Sketch Up	1	Electronic media • Web/online • CD- or DVD-based • Mobile or hand-held Apps • Smart phones • Tablets • Smart TV	10	Various printing media (e.g. photo-paper, tarpaulin, etc.)
				As req'd qty.	Printed materials
					Books and magazines Newspapers Brochures and flyers Billboards and tarpaulins
					- Prototype materials papers/cardboards - plastic - textiles - styrofoam - actual product being sold - corrugated boxes - wood - ceramics - tarpaulin - electrical gadgets - neon lights - digital displays - metallic materials - actual product being displayed - mannequins - organic materials

* *Can be either educational, license and open-source software*

In cases where there are specialized tools, equipment and facilities that are not generally considered standard requirements or not absolute requisites for training, the industry working group or TESDA may provide guidelines or specific advice on such matters.

3.5 TRAINING FACILITIES

The Visual Graphic Design Workshop must be of concrete structure. Based on class size of 20 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:

TEACHING/LEARNING AREAS	SIZE IN METERS	AREA IN SQ. METERS	QTY	TOTAL AREA IN SQ. METERS
Lecture Area	5 x 8	40	1	40
Learning Resource Area	3 x 5	15	1	15
Wash & Toilet Area	2 x 2	4	2	8
Total				63
Facilities / Equipment / Circulation**				20
Total Area				**83**

***** Area requirement is equivalent to 30% of the total teaching/learning areas***

3.6 TRAINERS QUALIFICATION

- Must be a holder of National TVET Trainer Certificate (NTTC) level I in Visual Graphic Design NC III;
- Must be computer literate and proficient user of graphic software;
- Must have at least five (5)-years visual graphics/design industry experience within the last 7 years

3.7 INSTITUTIONAL ASSESSMENT

Institutional Assessment is undertaken by trainees to determine their achievement of units of competency. A certificate of achievement is issued for each unit of competency. The institutional assessment is administered by the trainer/assessor.

The result of the institutional assessment may be considered as evidence for the assessment for national certification.

SECTION 4 NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS

Competency Assessment is the process of collecting evidence and making judgments whether competency has been achieved. The purpose of assessment is to confirm that an individual can perform to the standards expected at the workplace as expressed in relevant competency standards.

The assessment process is based on evidence or information gathered to prove achievement of competencies. The process may be applied to an employable unit(s) of competency in partial fulfillment of the requirements of the national qualification.

4.1 NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS

4.1.1 To attain the National Qualification of **Visual Graphic Design NC III**, the candidate must demonstrate competency in all the units listed in Section 1. Successful candidates shall be awarded a **National Certificate III level** signed by the TESDA Director General.

4.1.2 The qualification of **Visual Graphic Design NC III** may be attained through:

4.1.2.1 Accumulation of Certificates of Competency (COCs) in all the following clustered units of competencies:

COC 1 - Develop designs for logo and print media

- Develop designs for a logo
- Develop designs for a print media

COC 2 – Develop designs for user experience and user interface

- Develop designs for user experience
- Develop designs for user interface

COC 3 – Develop designs for product packaging

COC 4 – Design booth and product window/display

Successful candidates shall be awarded a **Certificate of Competency (COC)** in each of the core units.

4.1.2.2 Demonstration of competence through a single comprehensive project-type assessment covering all required units of competency of this qualification.

4.1.3 Upon accumulation and submission of all COCs acquired for all the relevant units of competency comprising this qualification, an individual shall be issued the corresponding National Certificate.

4.1.4 Assessment shall cover all competencies, with basic and common integrated or assessed concurrently with the core units of competency.

4.1.5 Any of the following are qualified to apply for assessment and certification:

4.1.5.1 Graduate of formal, non-formal, and informal, including enterprise-based, training programs.
4.1.5.2 Experienced workers (wage employed or self-employed)

4.1.6 Existing National Certificate (NC) and Certificate of Competency (COC) of individuals in Visual Graphic Design NCIII will still be in effect until such time that such NC and COC will have expired. Individuals are advised to take the assessment for this amended TR on or before the expiration of such certificates.

4.1.7 The guidelines on assessment and certification are discussed in detail in the "Operating Procedures on Assessment and Certification" and "Guidelines on the Implementation of the Philippine TVET Competency Assessment and Certification System (PTCACS)".

4.2 COMPETENCY ASSESSMENT REQUISITE

4.2.1 *Self-Assessment Guide*. The self-assessment guide (SAG) is accomplished by the candidate prior to actual competency assessment. SAG is a pre-assessment tool to help the candidate and the assessor determine what evidence is available, where gaps exist, including readiness for assessment.

This document can:

a. Identify the candidate's skills and knowledge
b. Highlight gaps in candidate's skills and knowledge
c. Provide critical guidance to the assessor and candidate on the evidence that need to be presented
d. Assist the candidate to identify key areas in which practice is needed or additional information or skills that should be gained prior to assessment.

4.2.2 *Accredited Assessment Center*. Only Assessment Center accredited by TESDA is authorized to manage the assessment activities of candidates for national certification.

4.2.3 *Accredited Competency Assessor*. Only competency assessor accredited by TESDA is authorized to assess the competencies of candidates for national certification.

ANNEX A. ICT COMPETENCY MAP – VISUAL GRAPHIC DESIGN NC III

BASIC COMPETENCIES

Receive and Respond to Workplace Communication	Work with Others	Demonstrate work values	Practice basic housekeeping procedures	Participate in Workplace Communication
Work in a Team Environment	Practice career professionalism	Practice occupational health and safety procedures	**Lead Workplace Communication**	**Lead Small Team**
Develop and practice negotiation skills	**Solve Problems Related to Work Activities**	**Use mathematical concepts and techniques**	**Use relevant technologies**	Utilize Specialist Communication Skills
Develop Team and Individuals	Apply Problem Solving Techniques in the Workplace	Collect, analyze and organize information	Plan and Organize Work	Promote environmental protection

COMMON COMPETENCIES

Apply Quality Standards	**Operate a Personal Computer**

CORE COMPETENCIES

Communicate effectively in a customer contact center	Render quality customer service	Utilize enterprise/ company technology	Conduct contact center campaign	Provide specialized support and assistance to customers
Lead a contact center work team	Manage the activities of a contact center work team	Use business technology	Use medical technology to carry out task	Produce text from audio transcription
Review/edit documents	Lead a team in delivering quality service	Apply traditional drawing techniques for animation	Produce traditional cleaned-up drawings	Produce traditional in-between drawings
Produce Traditional key poses/drawings for animation	Create 2D digital animation	Export Animation into Video file format	Produce digital cleaned-up drawings	Produce digital in-between drawings
Produce background designs	Composite and edit animation sequence	Create 3D digital animation	Produce storyboard for animation	Coordinate the production of animation
Produce over-all designs for animation	Produce key drawings for animation	Create 3D models for animation	Apply 3D texture and lighting to 3D models	Set character rigging
Create 2D digital animation	Produce cleaned-up and in-between drawings	Use an authoring tool to create an interactive sequence	Animate character	Composite and render animation sequence
Produce key drawings for animation	Utilize Software Methodologies	Develop Responsive Web Design	Create Interactive Websites (Using JavaScript)	Develop Website Backend Systems
Develop designs for a logo	Develop designs for print media	Develop designs for user experience	Develop designs for user interface	Develop designs for product packaging
Design booth and product/window display				

GLOSSARY OF TERMS

1. **Additive Color -** A color produced by light falling onto a surface, as compared to subtractive color. An additive color model involves light emitted directly from a source or illuminant of some sort. The additive reproduction process usually uses red, green and blue light to produce the other colors
2. **Anti-alias -** The blending of pixel colors on the perimeter of hard-edged shapes, like type, to smooth undesirable edges (jaggies).
3. **Artwork -** All original copy, including type, photos and illustrations, intended for printing. Also called art.
4. **Bitmap (or raster) image** - is one of the two major graphic types (the other being vector). Bitmap-based images are comprised of pixels in a grid. Each pixel or "bit" in the image contains information about the color to be displayed. Bitmap images have a fixed resolution and cannot be resized without losing image quality. Common bitmap-based formats are JPEG, GIF, TIFF, PNG, PICT, and BMP. Most bitmap images can be converted to other bitmap-based formats very easily. Bitmap images tend to have much large file sizes than vector graphics and they are often compressed to reduce their size. Although many graphics formats are bitmap-based, bitmap (BMP) is also a graphic format.
5. **CMYK - Acronym** for cyan-magenta-yellow-black. A color model that describes each color in terms of the quantity of each secondary color (cyan, magenta, yellow), and "key" (black) it contains. The CMYK system is used for printing.
6. **Color Balance -** Refers to amounts of process colors that simulate the colors of the original scene or photograph.
7. **Color Correct -** Adjust the relationship among the process colors to achieve desirable colors.
8. **Color Gamut -** Range of hues possible to reproduce using a specific device, such as a computer screen, or system, such as four-color process printing.
9. **Color Model -** Way of categorizing and describing the infinite array of colors found in nature.
10. **Color separation** - refers to color printing, is the reproduction of an image or text in color (as opposed to simpler black and white or monochrome printing). Color printing involves a series of steps, or transformations, in order to generate a quality color reproduction. The process of color separation starts by separating the original artwork into red, green, and blue components (for example by a digital scanner). The next step is to invert each of these separations. When a negative image of the red component is produced, the resulting image represents the cyan component of the image. Likewise, negatives are produced of the green and blue components to produce magenta and yellow separations, respectively. This is done because cyan, magenta, and yellow are subtractive primaries which each represent two of the three additive primaries (RGB) after one additive primary has been subtracted from white light.
11. **Composition -** (1) In typography, the assembly of typographic elements, such as words and paragraphs, into pages ready for printing. (2) In graphic design, the arrangement of type, graphics and other elements on the page.
12. **Computer graphics** is a sub-field of computer science and is concerned with digitally synthesizing and manipulating visual content. Although the term often refers to three-

dimensional computer graphics, it also encompasses two-dimensional graphics and image processing. Computer graphics is often differentiated from the field of visualization, although the two have many similarities.

13. **Critical Thinking** - the objective analysis and evaluation of an issue in order to form a judgment.
14. **Die line -** is the template for a package. It's a flattened outline of the cut lines and folds. You cannot create a product package design without one. If you took apart a cereal box and flattened it out, you'd be looking at the **die line**.
15. **Drawing** - is a means of making an image, using any of a wide variety of tools and techniques. It generally involves making marks on a surface by applying pressure from a tool, or moving a tool across a surface. Common tools are graphite pencils, pen and ink, inked brushes, wax color pencils, crayons, charcoals, pastels, and markers. Digital tools which simulate the effects of these are also used. The main techniques used in drawing are: line drawing, hatching, crosshatching, random hatching, scribbling, stippling, and blending.
16. **Electronic media** - are media that utilize electronics or electromechanical energy for the end user (audience) to access the content. This is in contrast to static media (mainly print media), which are most often created electronically, but don't require electronics to be accessed by the end user in the printed form.
17. **Filters -** the color filters filter the light by wavelength range, such that the separate filtered intensities include information about the color of light.
18. **Flattening -** A Photoshop CS process in which all visible layers are merged into the background, greatly reducing file size. Flattening an image discards all hidden layers and fills the remaining transparent areas with white.
19. **Graphic Arts -** is a term applied historically to the art of printmaking and drawing. In contemporary usage it refers to the applied trade-skills of a graphic designer or print technician. The term can include the trades of lithography, serigraphy and bindery, among others. Graphic arts as a trade can be traced back to the first instances of the stamped image or word.
20. **Graphic Design -** Arrangement of type and visual elements along with specifications for paper, ink colors and printing processes that, when combined, convey a visual message.
21. **Graphics -** Visual elements that supplement type to make printed messages more clear or interesting.
22. **Grayscale -** A sequence of shades ranging from black through white, used in computer graphics to add detail to images or to represent a color image on a monochrome output device.
23. **Handheld device** - is a pocket-sized computing device, typically comprising a small visual display screen for user output and a miniature keyboard or touch screen for user input.
24. **Holistic Skills -** All encompassing view based on the knowledge of the nature, functions, and properties of the components, their interactions, and their relationship to the whole.

    Read more: http://www.businessdictionary.com/definition/holistic.html
25. **Hue -** A specific color such as yellow or orange.

26. **Images** or **picture** - is an artifact, usually two-dimensional, that has a similar appearance to some subject—usually a physical object or a person. Images may be two-dimensional, such as a photograph, screen display, and as well as a three-dimensional, such as a statue. They may be captured by optical devices—such as cameras, mirrors, lenses, telescopes, microscopes, etc. and natural objects and phenomena, such as the human eye or water surfaces.
27. **Indexed Color -** Indexed formats are formats which are mapped to a smaller color palette - 256-colours or less. All GIF images - whose bit depths can range from 1 to 8 - are, by definition, indexed images. In an indexed image, colors are stored in a palette, which is sometimes referred to as a color lookup table. The indexed image's palette contains all of the colors that are available for the image.
28. **Interaction design -** is when we create engaging web interfaces with logical behaviors and actions.
29. **Layout -** A sample of the original providing (showing) position of printed work (direction, instructions) needed and desired.
30. **Layered -** In Photoshop, a layer is a section of information within a file. For example, a RGB file consists of at least four layers: the combined RGB layer, a Red layer, a Green layer, and a Blue.
31. **Leading -** Amount of space between lines of type.
32. **Logo (Logotype) -** A company, partnership or corporate creation (design) that denotes a unique entity. A possible combination of letters and art work to create a "sole" entity symbol of that specific unit.
33. **Lossless Compression -** The process of compressing a file such that, after being compressed and decompressed, it matches its original format bit for bit.
34. **Multichannel -** Color mode in which each multiple channel in Photoshop uses 256 levels of gray.
35. **Mockup -** or **mock-up**, is a scale or full-size model of a **design** or device, used for teaching, demonstration, **design** evaluation, promotion, and other purposes.
36. **Objects** – refers to the vector shapes, e.g rectangle, rounded shapes, ellipse and other irregular shapes.
37. **Page layout** - is the part of graphic design that deals in the arrangement and style treatment of elements (content) on a page.
38. **Path** - consists of the general outline of an object. Paths can be open or closed and can be made up of a combination of straight and curved segments. Open paths are straight or curved lines which can have varying thickness by stroking the path. Closed paths are shapes which can have a stroked outline and a filled interior. Paths can also be used to mask out or clip away portions of another image. These paths are referred to as clipping paths. Paths in graphics software are generally creating using a pen tool, Bézier curve tool, or less commonly, a spline or b-spline curve tool.
39. **Printmaking** is the process of making artworks by printing, normally on paper.
40. **Process color** - is a subtractive color model, used in color printing, also used to describe the printing process itself. Though it varies by print house, press operator, press manufacturer and press run, ink is typically applied in the order of the acronym.
41. **Prototype** - is an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from.

42. **Proof -** Test sheet made to reveal errors or flaws, predict results on press and record how a printing job is intended to appear when finished.
43. **Raster graphics** – see Bitmap definition.
44. **Resolution -** Sharpness of an image on film, paper, computer screen, disc, tape or other medium.
45. **Responsive Design -** aims to build websites which provide an optimal viewing and interaction experience.
46. **RGB -** Acronym for red-green-blue. The three colors of light which can be mixed to produce any other color. Colored images are often stored as a sequence of RGB triplets or as separate red, green, and blue overlays though this is not the only possible representation (see CMYK).
47. **Scale -** To enlarge or reduce a graphic display, such as a drawing or a photographic image, by adjusting its size proportionally.
48. **Sharpening -** In Photoshop, a variation of a traditional compositing technique used to sharpen edges in an image. It is useful for images intended both for print and online.
49. **Software –** computer programs and procedures concerned with the operation of an information system
50. **Spot color** – In offset printing, a spot color is any color generated by an ink (pure or mixed) that is printed using a single run. The widely-spread offset printing process is composed of four spot colors: Cyan, Magenta, Yellow and Key (black) commonly referred to as CMYK. More advanced processes involve the use of six spot colors (hexa-chromatic process), which add Orange and Green to the process (termed CMYKOG). The two additional spot colors are added to compensate for the inefficient reproduction of faint tints using CMYK colors only. However, offset technicians around the world use the term spot color to mean any color generated by a non-standard offset ink; such as metallic, fluorescent, spot varnish, or custom hand-mixed inks.
51. **Stroke** – refers to outline of an object.
52. **Subtractive Color -** Color produced by light reflected from a surface, as compared to additive color. Subtractive color includes hues in color photos and colors created by inks on paper.
53. **Tint -** Screening or adding white to a solid color for results of lightening that specific color.
54. **Trapping** is a method of adjusting areas where two distinct, adjacent colors meet so that press misregistration won't cause white spaces. Two kinds of trap process include : **a) spread -** a lighter object overlaps a darker background and seems to expand into the background and **b) choke -** a lighter background overlaps a darker object that falls within the background and seems to squeeze or reduce the object.
55. **UI (User Interface) Design –** is the process of designing the look and feel of an application.
56. **UX (User Experience) Design -** is the process of enhancing user satisfaction by improving the usability, accessibility, and pleasure provided in the interaction between the user and the product.
57. **Vector image** - is one of the two major graphic types (the other being bitmap). Vector graphics are made up of many individual objects. Each of these objects can be defined by mathematical statements and has individual properties assigned to it such

as color, fill, and outline. Vector graphics are resolution independent because they can be output to the highest quality at any scale.

58. **Visual arts** - are art forms that focus on the creation of works which are primarily visual in nature, such as painting, photography, printmaking, and filmmaking. Those that involve three-dimensional objects, such as sculpture and architecture, are called plastic arts.
59. **Wireflow -** are a design-specification format that combines wireframe-style page layout designs with a simplified flowchart-like way of representing interactions
60. **Wireframe** - also known as a page schematic or screen blueprint, is a visual guide that represents the skeletal framework of a website.

TRAINING REGULATIONS (TR)
DOCUMENT REVISION HISTORY

Qualification Title : VISUAL GRAPHIC DESIGN NC III
Qualification Code: ICTVGD318

Revision No.	Document Description Types*	Replaces Version (TESDA Board Resolution No./ Date)	New Version (TESDA Board Resolution No./ Date)	Deployment Circular
00	Document Created – Visual Graphic Design NC III	Not Applicable	TB No. 2007-58/ December 19, 2007	Not Applicable
01	Document Amended – Visual Graphic Design NC III	TB No. 2007-58/ December 19, 2007	TB No. 2018-04/ February 27, 2018	TESDA Circular No. __ s. 2018

Legend: ***Description Types**
- **Document Created**
- **Document Amended**

ACKNOWLEDGEMENTS

The Technical Education and Skills Development Authority (TESDA) wishes to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development and validation of these Training Regulations.

- **THE TECHNICAL EXPERTS PANEL (TEP) for 2017**

  MS. MARIE GRACE A. DIMARANAN
  Vice President, Animation Council of the Philippines, Inc. (ACPI)

  MR. ALSTAIRE ALLISON A. SARTHOU
  Illustrator / Graphics Designer
  Animation Director
  Instructor/Trainer
  Top Peg Animation & Creative Studio Inc.
  Accredited Assessor and Trainer for Visual Graphics Design NCIII, Illustration NCII and 2D Animation NCIII

  MR. JUNNAR ORIOQUE
  Artist/Graphics Designer

  MR. JOSEPH DE VERA
  Graphics Designer/ Instructor

  MS. KRISTINNE MARIE CLAUDIO
  Graphics Designer/Asst. Professor

- **THE PARTICIPANTS IN THE VALIDATION OF THIS TRAINING REGULATION**

  MS. MAY LAXAMANA (Animator/ graphic artist)
  MR. JEFFREY SARMIENTO (Graphics designer)

- **THE ANIMATION COUNCIL OF THE PHILIPPINES, INC. (ACPI)**

- **THE TESDA BOARD - STANDARDS SETTING AND SYSTEMS DEVELOPMENT COMMITTEE**

- **THE MANAGEMENT AND STAFF OF THE TESDA SECRETARIAT**

  - Qualifications and Standards Office (QSO)

Name	Company/industry	Email Address
Imelda B. Taganas	TESDA	ibtaganas@tesda.gov.ph
Julford C. Abasolo	TESDA	jcabasolo@tesda.gov.ph
Samuel E. Calado Jr.	TESDA	secaladojr@tesda.gov.ph
Venzel Y. Concoles	TESDA	vyconcoles@tesda.gov.ph