



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package
For a
METAL FABRICATOR**

Qualification Level: 1

Occupational Cluster: Technology and Design

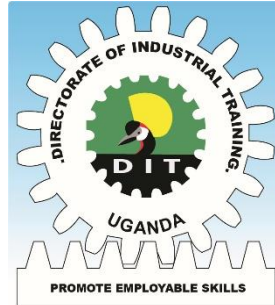
September 2020

Developed by:

**Qualifications Standards Department
Directorate of Industrial Training**

Funded by:

Government of Uganda



Assessment and Training Package

For a

METAL FABRICATOR

Qualification Level: 1

Occupational Cluster: Technology and Design

Directorate of Industrial Training
Plot 97/99 Jinja Road/ Corner 3rd Street,
P.O Box 20050, Lugogo, Kampala, Uganda
Tel: +256 414 253 704; +256 312 279 344
E-mail: uvqf.dit@gmail.com
[Web: www.dituganda.org](http://www.dituganda.org)

© Directorate of Industrial Training
2021

ISBN: 978-9913-626-63-7

ISO: 9001:2015 Certificate No.: UG92580A

All rights reserved. No reproduction or copy transmission of this publication may be made without written permission or in accordance with the provisions of the Copyright, Designs and Patents Act or under the terms of licence permitting limited copying issued by the licencing agency in Uganda. Any person who does any unauthorised act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

Under BTVET Act, 2008, the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that fall under the UVQF.
- (b) To regulate apprenticeship schemes.
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF.
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate.
- (e) To accredit training institutions or companies as assessment centres.
- (f) To determine fees payable under the Act.
- (g) To develop, apply, expand and improve the purposeful application of Uganda vocational qualifications defined in the UVQF.
- (h) To assess and award Uganda Vocational Qualifications.
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading.
- (j) To prescribe the procedure for the making of training schemes.

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award vocational qualifications of learners who meet the set standards of different studies.
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules.
- (b) Positive assessment and certification.
- (c) Assessment of prior learning.
- (d) Recognition of formal and non-formal training.
- (e) Self-paced or individual learning.
- (f) Work place learning.

For award and recognition of certificates, the BTVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational Education and Training under the UVQF.
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by the Minister on the recommendation of the Industrial Training Council.
- (3) The Certificates and Diplomas awarded under the Act shall be recognised in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- (a) Regulating Industrial Training and Trainers.
- (b) Developing Industrial Training Curricula.
- (c) Harmonising Curricula and Certificates of competence.
- (d) Assessing Industrial Training.
- (e) Development of Occupational Standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work.
- (f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organises and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

Table of Contents

Word from Permanent Secretary	iv
Executive Summary.....	vi
Acknowledgement	viii
Abbreviations and Acronyms	ix
Key Definitions	x
1.0 ATP-PART I	1
Occupational Profile for a Metal Fabricator	1
2.0 ATP-PART II.....	8
Training Modules for a Metal Fabricator.....	8
3.0 ATP- PART III.....	22
Assessment Instruments for a Metal Fabricator.....	22
Written Test Items (Samples).....	24
Performance Test Items (Samples)	30
4.0 ATP-PART IV.....	36
Information on Review Process	36

Word from Permanent Secretary

The Kajubi Report (1989) and the Uganda Government White Paper on Education Review (1992) emphasised that the Uganda Secondary School Education should be vocationalised.

The World Bank Report on education in Uganda 2007 observed that although Uganda was experiencing steady economic growth on one hand, the secondary education curriculum was inadequately addressing the social and economic needs of the country on the other. The Report further noted that it is not the very top academic cadres that contribute most to the growth of the GDP but rather the competent middle level technicians that are flexible and technologically literate that the economy needs in the labour market at all levels.

Correspondingly, the NDP III 2020/21- 2024/5 highlights (i) low labour productivity (ii) high youth unemployment (38%) (iii) low transition rates from training to employment (35%) as some of the key challenges to Human Capital Development in Uganda.

In order to overcome these challenges, NDP III 2020/21- 2024/5, under objective 2 peaks the need to train the learners for the urgently needed skills and mainstream a dual education and training system. This paved way for the development of the lower secondary school vocational curriculum which supports both academic and vocational training.

The afore is in line with the Uganda Vision 2040. Under section 261, it emphasises that learners will be accorded opportunities to excel in the skills areas they are placed into. These will range from sports and cut to technical and vocational training. Hitherto, section 262 clearly states that the entire education system will be changed to emphasise practical skills, attitude and moral values.

Government of Uganda through the Ministry of Education and Sports rolled out the New Lower Secondary Curriculum in secondary schools countrywide during the first term of the academic year 2020. The overall goal of this curriculum is to produce graduates with employable skills and who are competitive in the labour market. It should be emphasised that vocational training will produce graduates who are employable. In the New curriculum, emphasis will be on equipping learners with employable skills and competencies. This will enable learners perform the requisite duties of the specified occupations. This is the reason why the lower secondary school vocational curriculum was tailored to the assessment requirements of the world of work.

Reading from the Curriculum Framework page 12, it is stated that the learners will be assessed by DIT. Upon assessment and certification, the graduates will be employable and competitive in the labour market. It's against this background that DIT, within its mandate vested in the BTVET Act, 2008 comes on board to take the lead in the development of the requisite Assessment and Training Packages (ATPs) for the various occupations that will be assessed under the Lower Secondary Curriculum.

The ATPs can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the Assessment and Training Package for training, assessment and certification of a **METAL FABRICATOR QUALIFICATION LEVEL 1**.

Finally, I thank all individuals, organisations and review partners who have contributed and/or participated in the review of this noble document.



Alex Kakooza
Permanent secretary

Executive Summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1 **PART I: The Occupational Profile (OP) of a METAL FABRICATOR.** This Occupational Profile which was reviewed by Metal Fabricators practicing in the world of work mirrors the duties and tasks that Metal Fabricators are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Metal Fabricators both on the job as well as in training centres (or combinations of both venues of learning). The Training Modules herein have been reviewed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3 **PART III: Assessment Instruments** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a METAL FABRICATOR. These assessment instruments were reviewed jointly by job practitioners (Metal Fabricators) and instructors based on the occupational profile and training modules.
- 0.4 While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, - including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**
- 0.5 The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centres as well as companies can accommodate more learners in a given period of time.
- 0.6 In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

0.7 The parts of this Assessment and Training Package were sequentially reviewed as follows:

- i Part 1: Occupational Profile: **August 2020**
- ii Part 2: Training Modules: **August 2020**
- iii Part 3: Assessment Instruments (initial bank): **August 2020**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

DIT takes responsibility of any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. The suggestion can be communicated to DIT through P.O. Box 20050, Kampala or through email uvaf.dit@gmail.com.



Patrick Byakatonda
Ag Director

Acknowledgement

The Qualifications Standards Department of DIT wishes to sincerely acknowledge the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organisations:

- Members of the DIT Industrial Training Council,
- The Director and staff of DIT,
- Ministry of Education and Sports,
- The practitioners from the world of work,
- Teachers of Metal Works from various Secondary Schools,
- Metal Works Curriculum Specialists from NCDC,
- Examination Specialists from UNEB,
- The facilitators involved in guiding the review panel in their activities,
- The Government of Uganda for financing the review of this ATP.

Abbreviations and Acronyms

A&C	Assessment and Certification
ATP	Assessment and Training Packages
CBET	Competency Based Education and Training
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-Working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical, Vocational, Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Items

Key Definitions

Assessment	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
Certification	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
Competence	Integration of skills, knowledge, attitudes, attributes and expertise in doing /performing tasks in the world of work to a set standard.
Competency	(Occupational) competency is understood as the ability to perform tasks common to an occupation to a set standard.
CBET	Competence-based education and training means that programmes: <ol style="list-style-type: none">1. have content directly related to work2. focus is on 'doing something well'3. assessment is based upon industry work standards, and4. curricula are developed in modular form
Duty	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
Learning-Working Assignment (LWA)	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWAs are real work situations /assignments.
Modules	Modules are part(s) of a curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
Occupational Profile (OP)	An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment. Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.

Occupational Profiles define what a person is supposed to do in performance terms. It also contains generic information regarding related knowledge and skills, attitudes/behavior, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards.

Qualification A qualification is a formal recognition for demonstrating competence, based on formal assessment against set standards. A qualification is provided to the individual in form of a certificate specifying the nature of the competence.

Task Job tasks represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured.
(Also see: Duty)

1.0 ATP-PART I

Occupational Profile for a METAL FABRICATOR

- 1.1 The OCCUPATIONAL PROFILE for “METAL FABRICATOR” below defines the **Duties** and **Tasks** a competent METAL FABRICATOR is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements so work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and other East African businesses and industries.
- 1.3 To ensure that Occupational Profile is relevant for employment in Uganda and EastAfrica, DIT used the method of “occupational/job profiling.

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by a trained and experienced facilitator. During a two-day work shop the panelists defined the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the trends and concerns in the occupation/job. The panelists, facilitators and coordinators who participated in developing this Occupational Profile.

¹*In this document, only sample test items for assessing (practical) performance and occupational knowledge(theory) are included. A larger selection of test items can be obtained from an electronic Test Item Bank at Directorate of Industrial Training*

Job Expert Panel

Mugabi Douglas
Robert Metal Works

Kasinga Godfrey
Ntinda VTI

Ibanda Benard
Lugogo VTI

Muwonge Brian
Muwonge Metal Works

Alio Peter
Mengo Senior Secondary School

Hasahya Moses
Ndejje Secondary School

Ebwalu Robert
Agape Fabricators (U) Ltd

Mutebi Ronald
Kyambogo University

Buyondo Robert
Mengo Senior Secondary School

Co-ordinator
Mukyala E Ruth
Directorate of Industrial Training

Facilitators
Kusasira Agnes
Directorate of Industrial Training

Turyasingura Yusuf
Directorate of Industrial Training

Asiimwe Janet
Directorate of Industrial Training

Balyejusa Tulaasi Simon
Directorate of Industrial Training

Weere Joan Brenda
Directorate of Industrial Training

Funded by
The Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training

Occupational Profile
For a
"METAL FABRICATOR"

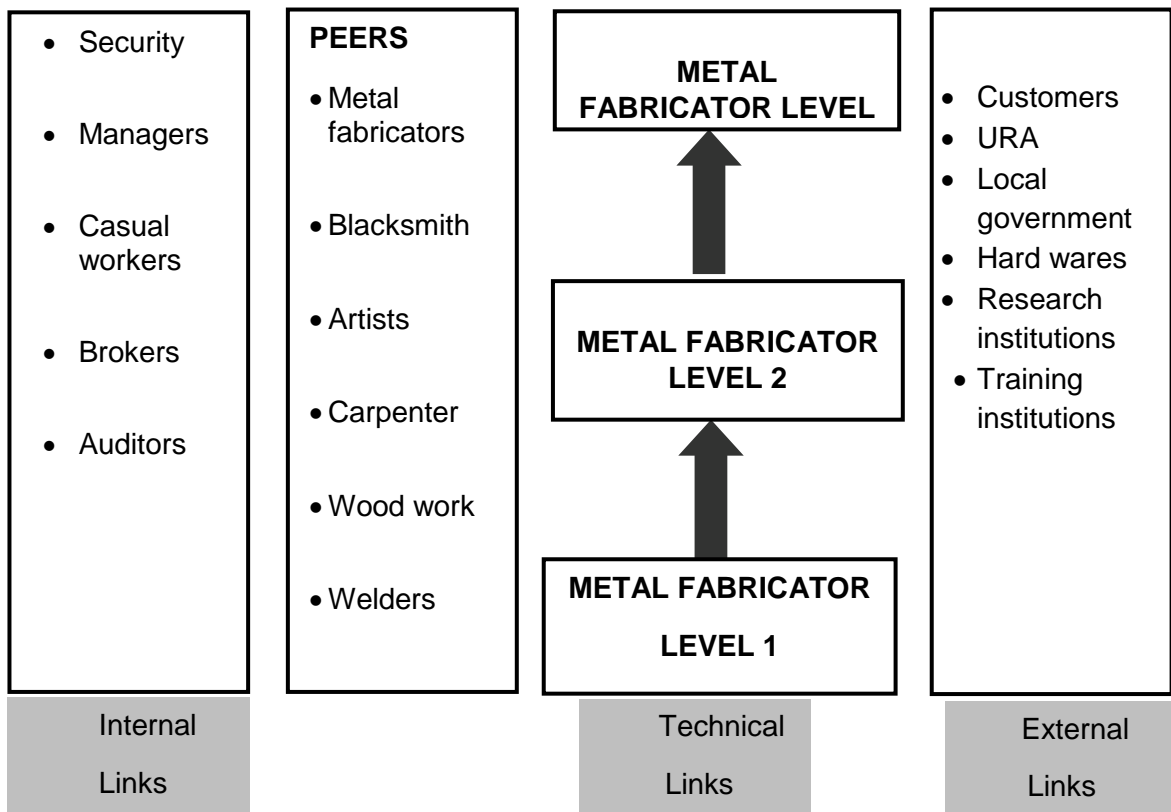
Reviewed by: Qualifications Standards Department
of the Directorate of Industrial training

Dates of workshop: 7th -11thSeptember 2020

NOMENCLATURE FOR THE OCCUPATION OF METAL FABRICATOR

Definition: A person who can plan, make and produce a product out of metal.

Job organisation chart for a Metal Fabricator



METAL FABRICATOR LEVEL I: A person who is able to produce simple metallic products, for example tap box, piggy bank, door hooks and handles, spear, burglar proof make, shovel, stool, bottle opener, key holder and coat hinge using basic hand tools and some powered machines.

METAL FABRICATOR II: A person who is able to use detailed drawings, to plan, verify measurements, develop patterns and prepare materials for finishing using power tools.

METAL FABRICATOR III: A person who is able to perform post welding checks and determine weights to produce metallic products using stationary machinery for example Drill press.

Duties and Tasks

A. PLAN FABRICATION WORK	A1. Prepare a work quotation	A2. Design fabrication work	A3. Interpret working Drawings
	A4. Prepare cutting list	A5. Prepare a budget	A6. Develop procurement plan
	A7. Schedule work	A8. Organise workplace	A9. Procure fabrication materials
	A10. Transport materials	A11. Communication	

B. PREPARE METALIC MATERIALS	B1. Determine tools, equipment and machines	B2. Select materials.	B3. Measure materials
	B4. Straighten material	B5. Mark materials	B6. Cut materials
	B7. Bend materials	B8. Chamfer materials	B9. Transport materials

C. ASSEMBLE METALLIC PIECES	C1. Select metallic pieces	C2. Determine joining method	C3. Set joining tools and machines
	C4. Join pieces	C5. Determine surface level	C6. Check diagonals
	C7. Strengthen joints		

D. CARRYOUT SMITH WORK	D1. Heat materials	D2. Forge materials	D3. Shape materials
	D4. Groove materials	D5. Mould materials	D6. Test joints
	D7. Cast material		

E. FINISH FABRICATION WORK	E1. Grind work	E2. Chip work	E3. Chamfer work
	E4. Fill work	E5. Smoothen surfaces	E6. Prim work
	E7. Paint work	E8. Dry work	

F. MAINTAIN MACHINES AND TOOLS	F1. Prepare maintenance schedule	F2. Lubricate machine parts	F3. Trouble shoot machine faults
	F4. Calibrate machines and tools	F5. Disassemble machines	F6. Repair faulty machines
	F7. Clean machines and tools	F8. Store machines and tools	F9. Sharpen machines and tools

G. PERFORM OCCUPATIONAL/ HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION PRACTICES	G1. Wear protective gear	G2. Display safety signs	G3. Dispose waste
	G4. Insulate cables	G5. Administer first aid	G6. Observe workshop rules and regulations
	G7. Sensitise workers on health issues.	G9. Safeguard against fire	

H. PERFORM ADMINISTRATIVE ACTIVITIES	H1. Conduct meetings	H2. Assign duties	H3. Maintain records
	H4. Prepare marketing plan	H5. Recruit workers	H6. Remunerate workers
	H7. Pay taxes	H8. Manage finance	H9. Communicate with stakeholders

Additional Information

<p>Generic Knowledge and Skills</p> <ol style="list-style-type: none"> 1. Use of machines 2. Material selection 3. Planning techniques 4. Dimensions and measurements 5. Communication 6. Health and safety precautions 7. Preparation of materials 8. Joining methods and techniques 	<ol style="list-style-type: none"> 9. Administration and management 10. Entrepreneurship tasks 11. Tools and equipment usage 12. Human resource management 13. Waste management 14. Forging techniques 15. Finishing materials and techniques 16. Grinding techniques 17. Marketing techniques
--	---

Tools, machines and equipment

<ol style="list-style-type: none"> 1. Spirit level 2. Tape measure 3. Try Square/Metre square 4. Hacksaw blade 5. Chisel 6. Hammer 7. Pliers 8. Clamps 9. Tongs 10. Vice 11. Soldering guns 12. Vernier calliper 13. Centre Punch 14. Micrometre screw gauge/Gauges 15. Welding generator 16. Grinder 17. Bending machine 18. Cutting machine 19. Drilling machine 20. Lathe machine 21. Gas cylinder 22. Furnace 23. Rolling machine 24. Grooving machine 25. Milling machine 26. Power saw 27. Marking table 28. Dividers and compass 29. Protractor 30. Scriber 31. Scraper 32. Rivet gun 33. Drill bit 	<ol style="list-style-type: none"> 34. Anvil 35. Router 36. V block 37. Centre bit 38. Rough and needle files 39. Oil stones 40. Welding transformer 41. Boring tool 42. Steel wire brush 43. Welding table 44. Torch tip cleaner 45. Combination square 46. Rail 47. Serge block 48. Welding shield 49. Welding helmet 50. Gloves 51. Safety glass/goggles 52. Welding helmet 53. Safety shoes/industrial boots 54. Milling cutter 55. Shear machine 56. Slotting tool 57. Turning tool 58. Facing tool 59. Stepped mandrill 60. Jig 61. Compressor 62. Spray gun 63. Hobbling machine 64. Broaching machine 65. Steel rule
---	--

Future Trends	
1. Computer literacy	10. Financial literacy
2. Management and human resource	11. Managing growth
3. Self-employment	12. Managing succession
4. Expansion of market	13. Labour availability
5. Expansion of production	14. Access to experts
6. Adaption of new technology	15. Access to policies and acts
7. Exportation	16. Taxes
8. Fluctuation	17. Security
9. Access to finances	18. Social practices
	19. Child labour

Attitudes/Traits/Behaviour

1. Respectful	17. Focussed
2. Creative	18. Cheerful
3. Clean	19. Time conscious
4. Principled	20. Organised
5. Organised	21. Hard working
6. Self-motivated	22. Resourceful
7. Punctual/time manager	23. Good listener
8. Self-driven	24. Result oriented
9. Innovative and creative	25. Trainable
10. Enthusiastic	26. Strategic
11. Disciplined	27. Empathetic
12. Social	28. Flexible
13. Realistic	29. Researcher
14. God fearing	30. Risk taker/risk averse
15. Honest	31. Dynamic
16. Active	32. Leader
	33. Patient
	34. Tolerant
	35. Practible

2.0 ATP-PART II

Training Modules for a METAL FABRICATOR

- 2.1 A curriculum is a “guide /plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile that provides the benchmark for Curriculum development as well as assessment.
- 2.2 This modular format of the curriculum allows learners of the occupation of METAL FABRICATOR LEVEL 1 to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centres, as well as companies can accommodate more learners in a given period of time.
- 2.3 The modules were developed jointly by both instructors and job practitioners. They were reviewed using the Occupational Profile as a reference point and taking into account the specifications of training and outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.

LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.

PEXs are therefore sub-sets of a LWA.

- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

WHO IS A METAL FABRICATOR QUALIFICATION LEVEL1?

A person who is able to produce simple metallic products, for example Tap Box, Piggy bank, Door hooks and handles, spear, burglar design, shovel, Stool, bottle opener, key holder and coat hinge using basic hand tools and some powered machines

TRAINING MODULES FOR A METAL FABRICATOR, LEVEL1

Code	Module Title	Average Time	
		Contact hours	Weeks
UE/MF/M1.1	Plan Basic Metal Work	80	2
UE/MF/M1.2	Forge Metals	240	6
UE/MF/M1.3	Fabricate Basic Metallic Products	240	6
UE/MF/M1.4	Maintain Workshop Tools and Machines	160	4
UE/MF/M1.5	Perform Basic Entrepreneurship Tasks	160	4
Summary	5 Training Modules	22 weeks = 5 months	

Note: Average duration is contact time but NOT calendar duration

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160hours of nominal learning

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner will be able to satisfactorily perform the included Learning Working Assignments, their Practical exercises and attached theoretical instructions, as the minimum exposure.

Prior to summative assessment by DIT, the users of these Modules Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP.

Code	UE/MF/M1.1
Module title	Plan Basic Metal Work
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Metal Fabricator UVQ1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to plan basic metal work
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Design Work LWA 1/2: Quote Work LWA 1/3: Perform Occupational Health, Safety and Environmental Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> 2. <i>The trainer/instructor is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 1/1: Design Work PEX1.1: Sketch work PEX1.2: Interpret drawings</p> <p>LWA 1/2: Quote Work PEX 2.1: Prepare material list PEX 2.1: Prepare work budget</p> <p>LWA 1/3: Perform Occupational Health, Safety and Environmental Practices PEX 3.1: Wear PPE PEX 3.2: Dispose waste PEX 3.3: Administer first aid PEX 3.4: Sensitise workers on key health issues PEX 3.5: Display safety signs PEX 3.6: Safeguard against fire</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None

Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognized reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Types of materials and their sizes • Types of drawings/projections e.g., isometric, orthographic and assembly drawing • Types and sizes of drawing papers • Interpretation of different types of dimensions and dimensioning styles • Market prices of materials • Safety precautions
Average duration of learning	<p>80 hours (10days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>3days of occupational theory and</i> • <i>7 days of occupational practice</i>
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum required tools/ equipment/ implements or equivalent	drawing pencils, set squares, ruler, drawing board, squaring tools, compass, divider, protractor, French curves
Minimum required materials and consumables or equivalent	drawing paper, drawing pen, drawing pencil
Special notes	

Code	UE/MF/M1.2
Module title	Forge Metals
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Metal Fabricator UVQ1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to forge different products
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Forge Products Out of Metal Bar</p> <p>LWA 3/2: Forge Products Out of Mild Steel Sheet</p> <p>LWA 3/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p><u>Note:</u></p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> 2. <i>The trainer/instructor is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 3/1: Forge Products Out of Metal Bar</p> <p>PEX 1.1: Forge door hook and handle</p> <p>PEX 1.2: Forge a chisel</p> <p>PEX 1.3: Forge a spear</p> <p>PEX 1.4: Forge a burglar</p> <p>PEX 1.5: Forge a shovel</p> <hr/> <p>LWA 3/2: Forge Products Out of Milled Steel Sheet</p> <p>PEX 2.1: Forge a door hinge</p> <p>PEX 2.2: Forge a door panel</p> <p>PEX 2.3: Make a meter box</p> <p>PEX 2.4: Make a charcoal stove</p> <p>PEX 2.5: Make a tool box</p> <hr/> <p>LWA 3/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 3.1: Dispose waste</p> <p>PEX 3.2: Administer first aid</p> <p>PEX 3.3: Wear PPE</p> <p>PEX 3.4: Storage of tools</p>

	<p>PEX 3.5: Safeguard against fire</p> <p>PEX 3.6: Provide cooling agent</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Forging methods • Forged materials • Measurements • Health and safety precautions • Rules and regulations • Market prices of materials • Safety precautions • Cutting skill • Preparation of materials • Painting skills • Filling skills • Sandpapering • Grinding skills • Types of materials used • Types of tools and equipment used
Average duration of learning	<p>240 hours (30days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5 days of occupational theory and • 25 days of occupational practice
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.
Minimum required tools/ equipment/ implements or equivalent	forge, tape measure, anvil, swage, filler, sledge hammer, upsetting tools, hacksaw, punch, tongs, gloves, quenching tank, blower, slice, porker, rake

Minimum required materials and consumables or equivalent	mild steel plates, charcoal, coal, refractory bricks, sand, oil, water
Special notes	

Code	UE/MF/M1.3
Module title	Fabricate Basic Components
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Metal Fabricator UVQ1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to able to fabricate basic components
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Prepare Materials LWA 2/1: Make Fixed Window LWA 2/2: Make Single Shuttered Door LWA 2/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p><u>Note:</u></p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> 2. <i>The trainer/instructor is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 2.1: Prepare Materials PEX 1.1: Select materials PEX 1.2: Measure material PEX 1.3: Cut materials PEX 1.4: Arrange pieces</p>
	<p>LWA 2/1: Make Fixed Window PEX 1.1: Assemble pieces PEX 1.2: Weld pieces PEX 1.3: Check diagonals PEX 1.4: Grind product PEX 1.5: Chip product PEX 1.6: Smoothen product PEX 1.7: Paint product</p>

	<p>LWA 2/2: Make Single Shuttered Door</p> <p>PEX 2.1: Prepare materials</p> <p>PEX 2.2: Measure materials</p> <p>PEX 2.3: Cut materials</p> <p>PEX 2.4: Weld metallic pieces</p> <p>PEX 2.5: Rabbet joints</p> <p>PEX 2.6: Grind single shuttered door</p> <p>PEX 2.7: Fill door</p> <p>PEX 2.8: Smoothen door</p> <p>PEX 2.9: Paint door</p>
	<p>LWA 2/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 3.1: Dispose waste</p> <p>PEX 3.2: Administer first aid</p> <p>PEX 3.3: Wear PPE</p> <p>PEX 3.4: Storage of tools</p> <p>PEX 3.5: Display safety signs</p> <p>PEX 3.6: Safeguard against fire</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Types of materials, their characteristics and uses • Tools and machines for measuring and cutting • Principles and sales of measurements • Calculations and conversion of units • Safety precautions • Measurement • Welding methods • Wall section pipe • Cutting skill • Preparation of materials • Painting skills • Filling skills

	<ul style="list-style-type: none"> • Sandpapering • Grinding skills
Average duration of learning	240 hours (30 days) of nominal learning suggested to include: <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>25 days of occupational practice</i>
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum required tools/ equipment/ implements or equivalent	tape measure, hacksaw, vice, angle grinder, scribes, Centre punch, try square, steel ruler, grinder, wire, brush, snip pliers, brush, overall, welder face shield, mild steel bar, aluminium
Minimum required materials and consumables or equivalent	hacksaw blade, cutting disk, mild steel section, paint, metal bar
Special notes	

Code	UE/MF/M1.4
Module title	Maintain Workshop Tools and Machines
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Metal Fabricator UVQ1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to service and maintenance basic hand tools machines used in a metal fabrication workshop.
Learning-Working Assignments (LWAs)	<p>LWA 6/1: Service Machines LWA 6/2: Replace Machine Components LWA 6/3: Organise Workshop LWA 6/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p><u>Note:</u></p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> <i>The trainer/instructor is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 6/1: Service Machines PEX 1.1: Disassemble machine components PEX 1.2: Clean machine components PEX 1.3: Lubricate moving parts PEX 1.4: Repair (Assemble parts) PEX 1.5: Carry out alignment and test-runs PEX 1.6: Oil tools PEX 1.7: Sharpen tools</p> <p>LWA 6/2: Replace Machine Components PEX 2.1: Fit components PEX 2.2: Tighten the components PEX 2.3: Test the machines</p> <p>LWA 6/3: Organise Workshop PEX 3.1: Clean workshop PEX 3.2: Store tools PEX 3.3: Demarcate galleries PEX 3.4: Label Machines</p> <p>LWA 6/4: Perform Occupational Health, Safety and Environmental Protection Practices PEX 4.1: Dispose waste</p>

	<p>PEX 4.2: Administer first aid</p> <p>PEX 4.3: Sensitise workers on key health issues</p> <p>PEX 4.4: Wear PPE</p> <p>PEX 4.5: Display safety signs</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognized reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Types of materials and their sizes • Types of drawings/projections e.g., isometric, orthographic and assembly drawing • Types and sizes of drawing papers • Interpretation of different types of dimensions and dimensioning styles • Market prices of materials • Safety precautions
Average duration of learning	<p>160hours (20 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>15 days of occupational practice</i>
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum required tools/ equipment/ implements or equivalent	drawing pencils, set squares, ruler, drawing board, squaring tools, compass, divider, protractor, French curves
Minimum required materials and consumables or equivalent	drawing paper, drawing pen, drawing pencil
Special notes	

Code	UE/MF/M1.5
Module title	Perform Basic Entrepreneurship Tasks
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Metal Fabricator UVQ1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to perform basic entrepreneurship skills
Learning-Working Assignments (LWAs)	<p>LWA 7/1: Market Products LWA 7/2: Communicate with Clients LWA 7/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p><u>Note:</u></p> <ol style="list-style-type: none"> 1 The learning exercises may be repeated until the trainee acquires targeted competence; 2 The trainer/instructor is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.
Related Practical Exercises (PEXs)	<p>LWA 7/1: Market Products PEX 1.1: Advertise products PEX 1.2: Price products PEX 1.2: Brand products</p> <p>LWA 7/2: Communicate with Clients PEX 2.1: Receive clients PEX 2.2: Make deliveries PEX 2.3: Document work</p> <p>LWA 7/3: Perform Occupational Health, Safety and Environmental Protection Practices PEX 4.1: Dispose waste PEX 4.2: Administer first aid PEX 4.3: Sensitise workers on key health issues PEX 4.4: Wear PPE</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None

Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognized reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Use of ICT as a marketing tool • Interpersonal skills • Grading and showcasing products • Receipt and invoice writing • Branding skills • Safety precautions • Marketing techniques
Average duration of learning	<p>160 hours (20 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>15 days of occupational practice</i>
Suggestions on organisation of learning	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
Assessment	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank</p>
Minimum required tools/ equipment/ implements or equivalent	<p>albums, camera, signposts, stamps, billboards, calculators, phones, computers, TV and radio broadcasts</p>
Minimum required materials and consumables or equivalent	<p>receipt books, pens, invoice books, ink pad, carbon papers</p>
Special notes	

3.0 ATP- PART III

Assessment Instruments for a METAL FABRICATOR

- 3.1 Assessment of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards.
- 3.2 Assessment of occupational competence should comprise of both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile and Training Modules, a combined panel of job practitioners and Instructors reviewed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at the Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business enterprises. They comprise of a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items
 - Multiple choice test items
 - Matching test items
- These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment/test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous/formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally or informally.
- 3.8 In this document, samples of test items for assessing both performance (practical) and occupational knowledge (theory) of a METAL FABRICATOR are included.

3.9 Overview of Test Item Samples Included

No	Type of test Items	Numbers included
1.	Written (Theory) short answer	2
2.	Written (Theory) multiple choice	2
3.	Written (Theory) matching with generic	2
4.	Performance (Practical) test items	2
	Total	8

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- no.1			
Occupational Title:	Metal Fabricator			
Competence level:	1			
Code no.				
Test Item type:	Short answer	✓		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related modules:	M1.3			
Time allocation:	2 minutes			

Test Item	List down four tools used when fabricating basic metallic components.
Answer space	(i) (ii) (iii) (iv)
Expected Key (answers)	(i) Try measure (ii) Tape measure (iii) Chipping hammer (iv) Ball pen hammer (v) Wire brush (vi) Scriber

DIT/ QS	Test Item Database Written (Theory) Test Item- no.2			
Occupational Title:	Metal Fabricator			
Competence level:	1			
Code no.				
Test Item type:	Short answer	✓		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related modules:	M1.2			
Time allocation:	2 minutes			

Test Item	Mention four types of tongs used in forging			
Answer space	(i)		
	(ii)		
	(iii)		
	(iv)		
Expected Key (answers)	(i)	Open mouth		
	(ii)	Close mouth		
	(iii)	Hollow bit		
	(iv)	Flat mouth		
	(v)	Pick up		
	(vi)	Side mouth		

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 3			
Occupational Title:	Metal Fabricator			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	✓		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related modules:	M1.5			
Time allocation:	1 minute			

Test Item	Which of the following is the best method of preventing sheet metal from rusting?
Distractors and correct answers	<ul style="list-style-type: none"> A. Greasing B. Oiling C. Painting D. Electro plating

Key (answer)	C
---------------------	---

DIT/ QS	Test Item Database Written (Theory) Test Item- no.4			
Occupational Title:	Metal Fabricator			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	✓		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related modules:	M1.2			
Time allocation:	1 minute			

Test Item	Which of the following is the main forging equipment?
Distractors and correct answers	A. Hammer B. Anvil C. Tong D. Platter

Key (answer)	B
--------------	---

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Metal Fabricator			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic √	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related module:	M1:2			
Time allocation:	4 minutes			

Test Item	Match the following machines with their functions when forging metallic products
------------------	--

Column A (Machines)	
A	Angle grinder
B	Welding machine
C	Hand drill
D	Aforge
E	Lathe machine

Column B (Functions)	
1	Turning
2	Measuring length
3	Cutting mild steel plate pieces
4	Tacking joints
5	Making holes
6	Heating metal components
7	Cutting gear teeth

Key (answer)	A:3, B:4, C:5, D:7, E:1
---------------------	-------------------------

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Metal Fabricator			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic ✓	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September, 2020			
Related module:	M1:2			
Time allocation:	4 minutes			

Test Item	Match the following forging tools with their functions
------------------	--

Column A (Tools)	
A	Hammer
B	Tong
C	Rake
D	Porker

Column B (Functions)	
1	Holding hot materials
2	Cutting hot metals
3	Shaping hot metal
4	Adding charcoal
5	Removing impurities

Key (answer)	A:3, B:1, C:4, D:5
---------------------	--------------------

PERFORMANCE TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Performance Test Item- no. 7
Occupational Title:	Metal Fabricator
Competence level:	1
Code no.	
Test Item:	Make a stool of 25*25mm from a mild steel plate of 1.5mm
Complexity level:	P2
Date of OP:	September 2020
Related modules:	M1.2minutes
Related skills and knowledge:	<ul style="list-style-type: none"> ▪ Plan work ▪ Ability to measure and mark ▪ Use of machines and tools ▪ Health and safety precaution ▪ Knowledge of materials ▪ Cutting materials ▪ Joining materials ▪ Finishing product
Required tools, Materials and Equipment:	Tape measure, try square, hacksaw, vice, scribe, welding machine, welding rods, angle grinder, safety wear, mild steel hollow section (25*25*1.5mm)mild steel plate (1.5mm)
Time allocation:	6 Hours
Preferred venue:	Training institution/ Workshop / Garage
Remarks for candidates	<ul style="list-style-type: none"> ▪ Candidates must have PPE
Remarks for assessors	<ul style="list-style-type: none"> ▪ Provide all the required tools, equipment and materials for assessment

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Prepared workplace	Wore protective gear i.e. Overall, safety boots Hand gloves, mask/shield		4
		Cleaned workshop		2
		Dirt free workshop observed		2
2	Prepared materials	Interpreted drawing	2	
		Selected material		
		The following length measured		
		i) top of 400mm observed		2
		ii) stand of 700mm height observed		2
		iii) support of 500mm*500mm observed		2
		Cut the stand	2	
		Support and cut pieces observed		2
		Chamfered pieces		2
		Chamfered pieces observed	2	
3	Joined metallic pieces	Assembled pieces	2	
		Tack welded pieces	2	
		Checked squares	2	
		90 degrees observed		3
		Checked diagonals	1	
		Diagonals of same length observed		3
		Checked level of assembled product	1	
		Stable stool observed		3
		Strengthen joints of a stool with a full weld	2	
		Fine weld bead observed		4
		Chipped off slag	2	
4	Finishing performed	Ground stool	2	
		Smooth surface observed		2
		Filled stool	1	
		Smoothened stool	2	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Smooth surface of the stool observed		2
		Cleaned stool	2	
		Primed stool	2	
		Painted stool	2	
		Painted stool observed		4
		Dried stool	3	
	TOTAL		38	37
			75	

DIT/ QS	Test Item Database Performance Test Item- no. 8
Occupational Title:	Metal Fabricator
Competence level:	1
Code no.	
Test Item:	Make a square charcoal stove of 200*200*150*1.2mm using a mild steel sheet 1200mm*1200mm*1.2mm
Complexity level:	P2
Date of OP:	September 2020
Related modules:	M1.
Related skills and knowledge:	<ul style="list-style-type: none"> ▪ Measurement specifications ▪ Material usage ▪ Cutting materials ▪ Welding methods and techniques ▪ Grinding techniques ▪ Fabrication rules and regulations ▪ Health and safety precautions
Required tools, Materials and Equipment:	tape measure, scribe, hacksaw, ball peen hammer, plier, chipping hammer, chisel, file, grinding machine, welding machine.
Time allocation:	6 Hours
Preferred venue:	Training institution/ Workshop / Garage
Remarks for candidates	<ul style="list-style-type: none"> ▪ Candidates must have PPE
Remarks for assessors	<ul style="list-style-type: none"> ▪ Provide all the required tools, equipment and materials for assessment

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Organise workplace	Wore protective gear i.e. Overall, safety boots Hand gloves, mask/shield		2
		Selected materials		1
		working drawing observed		1
2	Preparation of	Measured materials		2

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
	Prepared materials	Measured materials		2
		Angle line 25*25*3mm)verified	2	
		Sheet metal (200*150*1.2mm) verified	2	
		Cut the measured materials	2	
		Flat strips of the following measurements 4 pieces of 45*16*3mm observed 2 pieces of 150*16*3mm verified		2
			2	
3	Bend materials	Curved handle observed from bent flat strip of 150*16*3mm		2
4	Assembled the work piece	Joins pieces together	2	
		Assembled cut pieces observed		2
		2 pieces of Handles of 150*16*3mm *2pcs	2	
		2 pieces of Handles of 150*16*3mm observed		2
		Ark Welded bottom piece of 200*150*3mm verified	2	
		Ark Welded bottom piece of 200*150*3mm observed		3
		4 pieces of stands of 125*25*25*3mm verified	2	
		4 pieces of stands of 125*25*25*3mm observed		2
		4 pieces of saucepan rest of 75*16*3mm verified	2	
		4 pieces of saucepan rest of 75*16*3mm observed		2
5	Full welding performed	Welding machine set	2	
		Hissing sound of welding machine heard		2
		Full welded 73-80° electrode angle	2	
		73-80° electrode angle observed		2
6	Inspected product	Checked the squareness	2	
		Checked diagonals	2	
		Checked weld defects	2	
		Correct shape observed		2
		Straightness observed		2
7	Finished product	Chamfered sharp edges		2
		Smooth sharp edges observed		2
		Removed slag	2	2

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Filled smooth product observed		2
8	Cleaned workplace	Disposed waste		2
		Cleaned tools		2
		Cleaned tools		2
	TOTAL		30	50
			80	

4.0 ATP-PART IV

INFORMATION ON REVIEW PROCESS

4.1 Occupational Profile Review (September 2020)

The Occupational Profile was exclusively reviewed by job practitioners who were working in the Joiner occupation. The job expert panel, guided by UVQF Facilitators, defined duties and tasks performed and provided additional generic information regarding the occupation

4.2 Training Module Review (September 2020)

Based on the Occupational Profile for Joiner of September 2020, training modules were reviewed by job practitioners, guided by UVQF Facilitators.

4.3 Test Item Review (September 2020)

Based on the Occupational Profile for Joiner of September 2020, and Training Modules, Test Items were reviewed by combined panels of instructors and job practitioners, guided by UVQF Facilitators.

4.4 Methodology

The rationale for the Assessment and Training Package review was to link vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry- led Standards-Based Assessment.

Active participation of both instructors and job practitioners' panels consolidated the development philosophy.

The panelists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.

4.5 Review panels

The participating panels of Job Practitioners required at review stages were constituted by members from the following organisations:

Review panel		
No.	Name	Institution/ Organisation
1.	Mutebi Ronald	Kyambogo University
2.	Buyondo Robert	Mengo senior School
3.	Alio Peter	Mengo senior School
4.	Ebwalu Robert	Agape Fabricators (U) Ltd
5.	Kasinga Godfrey	Ntinda Vocational Training Institute
6.	Mugabi Douglas	Robert Metal Works
7.	Hasahya Moses	Ndejje Secondary School
8.	Ibanda Bernard	Lugogo Vocational Training Institute
9.	Muwonge Brian	Muwonge Metal Works

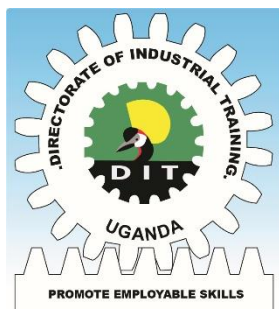
4.6 Facilitator team

This Assessment and Training Package was reviewed by a Facilitator team listed below:

1. **Team Leader:** Ms. Mukyala Ruth Ag Deputy Director, DIT
2. **Facilitators** (Occupational Profile Review): Ms. Kusasiira Agnes, Ms. Asiimwe Janet, Mr. Turyasingura Yusuf, Mr. Balyejusa Simon and Ms. Were Joan Brenda.
3. **Facilitators** (Training Modules Review): Ms. Kusasiira Agnes, Ms. Asiimwe Janet, Mr. Turyasingura Yusuf, Mr. Balyejusa Simon and Ms. Were Joan Brenda.
4. **Facilitators** (Test Item Review): Ms. Kusasiira Agnes, Ms. Asiimwe Janet, Mr. Turyasingura Yusuf, Mr. Balyejusa Simon and Ms. Were Joan Brenda.
5. **Compiled by:** Mr. Turyasingura Yusuf, Data Entrant DIT
6. **Coordinated by:** Mr. Byakatonda Patrick Ag. Director, DIT;

Reference time

The Assessment and Training Package was compiled in September 2020 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.



ISBN 978-9913-626-63-7



9 789913 626637