TESDA CIRCULAR

SUBJECT: Implementing Guidelines on the Deployment of Reviewed and Amended Tools, Equipment and Materials (TEMs), Training Facilities (TFs) and Trainers' Qualifications (TQs) of 40 Training Regulations Under Various Sectors		Page 1 of 3 pages Number 055 series of 2023
Date Issued: 06 DEC 2023	Effectivity: Immediately	Supersedes:

In the interest of service and to ensure effective and efficient implementation of the Training Regulations (TRs) by the concerned industry sector, TVET institutions, and general public, the following guidelines are hereby issued:

I. BACKGROUND/RATIONALE

TESDA Board Resolution No. **2023-04** dated **16 August 2023** on **"Approving the Amendments of Tools, Equipment and Materials (TEM), Training Facilities (TF) and Trainers' Qualifications (TQ) of the Forty (40) Training Regulations Under Various Sectors"** was issued.

It is the policy of TESDA to review the Training Regulations (TRs) promulgated by the TESDA Board after three (3) years of promulgation.

On 03 March 2020, during Stakeholder's Dialogue (Luzon Cluster), one of the concerns/issues raised therein is the obsolete tools, equipment, supplies, and materials prescribed in some Training Regulations.

One of the findings raised during the Orientation/Calibration of Inspection Team from NISP, IIAS, Regional and Provincial UTPRAS, and Compliance Audit Focals in the Conduct of Inspection, Evaluation of Program Registration Documents and Audits on 26-28 January 2021 was the timely update of the TRs in as much that the Tools, Equipment and Materials are already outdated, that significantly affect the TVI's compliance with the requirements.

On June 3 and 21, 2021, the QSO facilitated consultation workshops with Industry Association representatives/ experts/ practitioners for the second batch of forty (40) Training Regulations. The workshop's output is the proposed/amended updated tools, equipment, materials, training facilities, and trainers' qualifications. As noted, the forty (40) TRs are from the remaining TRs to be reviewed from the 217 target/identified TRs.

On February 8-9. 2022, simultaneous consultation workshops with representatives from UNITVET, TVIs, TTIs and focal from ROPODOs were conducted to review the proposed updated TEMs, TFs, and TQs of the forty (40) TRs. The workshop's output is the finalized updated tools, equipment, materials, training facilities, and trainers' qualification.

II. OBJECTIVES

These guidelines shall serve as basis for registration of new programs and re-issuance of Certificate of TVET Program Registration (CTPR) of registered programs affected by the review of the tools, equipment and materials, training facilities and trainers' qualifications, of the forty (40) Training Regulations.

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SUBJECT:	Implementing Guidelines on the Deployment of Reviewed and Amended Tools, Equipment and Materials (TEMs), Training Facilities (TFs) and Trainers' Qualifications (TQs) of 40 Training Regulations Under Various Sectors		Page 2 of 3 pages Number 055 series of 2023
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III. SCOPE / COVERAGE

New and existing training programs registered under the reviewed forty (40) Training Regulations (TRs) shall be covered by this Circular.

IV. PROGRAM REGISTRATION

1. TVIs with existing registered programs affected by the amended list of tools, equipment, materials, facilities, trainer's qualification shall undertake re-issuance of the CTPRs, which shall commence within a period of one year upon deployment of this Circular;

2. Registration of new programs shall comply to the amended list of tools, equipment, materials, facilities, trainer's qualification of the 40 reviewed TRs;

3. The attached, as seen in **Annex A**, list of Training Regulations, which has obsolete tools, equipment and materials (TEMs), training facilities (TFs), and trainers' qualifications (TQ), shall be deemed amended and given the current advancement in technology, the latest TEMs, TFs and TQs shall be considered by the operating units in the registration of training programs;

4. To provide more flexibility in the implementation of training programs, a list of alternative tools, equipment, and materials that serve equivalent functions shall be provided as an Annotation to the list of TEMs of the 40 reviewed TRs. Subject to the availability of such TEMs in the local market and consideration of community practices, the annotation shall apply;

5. All Regional/Provincial/District Directors are hereby instructed to process the application for Program Registration within the allowable Process Cycle Time (PCT) indicated in the Operating Procedure on Program Registration or existing guidelines, through face-to-face or online modalities; and

6. Closure proceedings shall apply to registered programs that will not migrate, through the re-issuance of CTPRs to the amended 40 TRs indicated in this Circular, within a period of one year from the deployment.

V. ASSESSMENT CENTER ACCREDITATION

1. The TEMs indicated in the CATs are of minimum requirements, hence the use of recent, high-end, or up-to-date tools, supplies, materials, and equipment with equivalent functions and currently available in the market are acceptable and considered as alternatives to the list of TEMs; and

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2. For existing accredited qualifications of Assessment Center (AC), re-accreditation/migration shall not be required considering that the alternative TEMs do not directly affect the actual conduct of competency assessment. The concerned AC shall request for the conduct of ocular inspection to ensure compliance and congruence of such alternative to the specified list TEM in the CATs. Inspection report and validated list of updated TEMs shall form part of the Accreditation documents of the AC.

VI. MONITORING AND FEEDBACK SYSTEM

1. The Regional and Provincial/District Offices (ROPO/DO) shall closely monitor the implementation of the registered programs under these TRs; and

2. The ROPO/DO shall require the education and training providers with the registered program under these TRs to report the enrolled, graduates and employed in the T2MIS as part of the regular monitoring and feedback system.

VII. EFFECTIVITY

This Circular shall take effect as indicated and shall supersede all other issuances inconsistent hereof. Wide dissemination of this Circular by all concerned is hereby enjoined.

SUHARTO T. MANGUDADATU, Ph.D.
Secretary/Director General, TESDA

SECTOR	QUALIFICATION
Agricultural, Forestry and Fishery	1. Agricultural Crops Production NC II
	2. Agricultural Crops Production NC III
	3. Agricultural Machinery Operation NC II
	4. Animal Production (Ruminants) NC II
	5. Artificial Insemination (Swine) NC II
	6. Fish Capture NC I
	7. Fishing Gear Repair and Maintenance NC III
	8. Milking Operation NC II
	9. Organic Agriculture Production NC II
Automotive and Land Transportation	10. Automotive Engine Rebuilding NC II
	11. Automotive Servicing NC IV
Electrical and Electronics	12. Computer Systems Servicing NC II
	13. Electrical Installation and Maintenance NC IV
	14. Electronics Products Assembly and Servicing NC II
Garments Sector	15. Dressmaking NC II
	16. Fashion Design (Apparel) NC III
	17. Tailoring NC II
Heating, Ventilation, Air-Conditioning and Refrigeration (HVAC/R)	18. Ice Plant Refrigeration Servicing NC III
Human Health/Health Care	19. Ophthalmic Lens Services NC II
Information and Communication Technology	20. 2D Game Art Development NC III
	21. 3D Game Art Development NC III
	22. Game Programming NC III
	23. Medical Coding and Claims Processing NC III
Logistics	24. Warehousing Services NC II
Metals and Engineering	25. CAD/CAM Operation NC III
	26. CNC Lathe Machine Operation NC II
	27. CNC Lathe Machine Operation NC III
	28. CNC Milling Machine Operation NC II
	29. CNC Milling Machine Operation NC III
	30. Machining NC II
	31. Machining NC III
	32. Mechanical Drafting NC I
	33. Plant Maintenance NC I
	34. Press Machine Operation NC I
	35. Tool and Die Making NC II
Social and Other Community Development	36. Microfinance Technology NC II
	37. Microfinance Technology NC IV
Utilities	38. Garbage Collection NC I
	39. Sanitary Landfill Operation NC II
	40. Sanitary Landfill Operation NC III

I. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
AGRICULTURAL CROPS PRODUCTION NC II	**Description**	**Qty**	**Description**	**Qty**
	Basin	5 pcs.	Basin	5 pcs
	Broomstick	10 pcs	Broomstick	5 pcs
	Pail-12Li.	25 pcs	Pail-12Li.	5 pcs
	Cutting tools		Cutting tools	
	Pruning saw	5 pcs.	• Pruning saw	5 pcs
	Hedge shear	5 pcs.	• Hedge shear	5 pcs
	Kitchen knife	5 pcs.	• Kitchen knife	5 pcs
	Cutter	5 pcs.	• Cutter	5 pcs
	Pliers	5 pcs.	• Pliers	5 pcs
	Pruning shears	25 pcs	• Pruning Shears	5 pcs
			• Budding knife	5 pcs
			• Bolo	5 pcs
			• Scissors	5 pcs
			• Grafting knife	5 pcs
	Digging tool		Digging tool	
	Steel bar	5 pcs.	• Steel bar	5 pcs
	Hole digger	5 pcs.	• Hole digger	5 pcs
	Garden hoe	5 pcs.	• Garden hoe	5 pcs
	Shovel	5 pcs.	• Shovel	5 pcs
			• Pick mattock	5 pcs
	Crates		Crates	
	Wooden crates	25 pcs.	• Wooden crates	10 pcs
	Plastic crates	25 pcs.	• Plastic crates	10 pcs
	Styro crates	25 pcs.	• Styro crates	10 pcs
	Harvesting tools		Harvesting tools	
	Scythe	25 pcs.	• Scythe	5 pcs
	Harvesting pole	13 pcs.	• Harvesting pole	5 pcs
	Ladder	2 pcs.	• Ladder	5 pcs
	Hand trowel	25 pcs.	• Hand trowel	5 pcs
	Hard Hat	25 pcs.	Hard hat	25 pcs
	Measuring cups	2 pcs.	Measuring cups	5 pcs
	Sprinklers	12 pcs.	Sprinklers	5 pcs
	Tools cabinet	1 pc.	Tools Cabinet	1 pc

	Plow	1 pc.	Plow	1 pc
	Rake	5 pcs	Rake	5 pcs
	Soil auger	1 unit	Soil Auger	1 pc
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Soil moisture and pH meter	5 units	Soil moisture and pH meter	5 units
	Wheel barrow	5 units	Wheel barrow	5 units
	Comb-tooth harrow*	1 unit	Comb-tooth harrow*	1 unit
	Hand tractor*	1 unit	Hand tractor*	1 unit
	Knapsack sprayer	5 units	Knapsack sprayer	5 units
	Hand sprayer	5 units	Hand sprayer	5 units
	Power sprayer	1 unit	Power sprayer	1 unit
	Grass cutter*	2 units	Grass cutter*	2 units
	Overhead sprinkler	5 units	Overhead sprinkler	5 units
	Sprinkler mist	5 units	---	
	Button dripper	5 units	Button dripper	5 units
	LCD/Overhead projector	1 unit	LCD/ LED Projector/ LED TV/ Smart TV	1 unit
	Post harvest treatment equipment*	1 unit	Post harvest treatment equipment*	1 unit
	Desktop computer/laptop	1 unit	Computer set with complete accessories	1 unit
			Printer, colored	1 unit
	PPE	25 units	PPE	
			• Hard Hat/Farmer Hat	25 pcs
			• Gloves (Farmers Gloves)	25 pcs
			• Mask	25 pcs
			• Rubber Boots	25 pcs
			• Long Sleeves Shirt	25 pcs
			Soil auger	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Petri dish	25 pcs.	Petri dish	25 pcs
	Calculator	25 pcs.	Calculator	25 pcs
	Puncher	5 units	Puncher	5 units
	Seedling tray with different holes	100 pcs.	Seedling tray with different holes	50 pcs
	Agri bag/plastics	10 m.	Plastic mulch	1 roll
	PE bag with different sizes	1000 pcs.	PE Bag	
			• small	300 pcs
			• medium	300 pcs

			• large	400 pcs
	Growing media	10 sacks	Growing media mixture of the following: - soil - coco coir, - carbonized rice hull, - vermicompost	5 sacks (50kg/ sack)
	Rooting hormone	1 bot.	Rooting hormone	1 bot
	Basket	25 pcs.	---	
	Fish net	20 m	Garden net	20 m
	Strainer	5 pcs.	Strainer	5 pcs
	Plastic sheet	10 kilos	---	
	Fertilizers	10 kilos	Fertilizers	
			• Complete (14-14-14)	10 kg
			• Urea (46-0-0)	10 kg
			• Muriate of potash (0-0-60)	10 kg
			• Ammonium phosphate (16-20-0)	10 kg
	Flower inducer	1 kilo	Flower inducer - potassium nitrate	1 kg
	Board marker	2 pcs.	Board marker	2 pcs
	White board	1 unit	White board	1 unit
	Eraser	1 pc.	White board eraser	1 pc
	Pesticides	1 bot.	Pesticides	
			• Fungicide	1 liter
			• Insecticide	1 liter
			• Herbicide	1 liter
	Rope	1 roll	Plastic Rope	20 m
	Rubber band	1 box	Rubber band	1 box
	Seed box	5 units	---	
	Seedlings assorted	100 pcs.	Seedlings assorted	100 pcs
	Detergent soap	1 box	Detergent soap	1 box
	Bamboo stick	1 bundle	Bamboo stick	1 bundle
	Bond paper	1 rim	Bond paper	1 rim
	Clips	1 box	Clips	1 box
	First aid supplies	1 set	First aid supplies	1 set
	Permanent pens	5 pcs.	Permanent pens	5 pcs
	Mulching materials	1 roll	---	
	String	1 roll	---	
	Plastic twine	1 roll	Plastic twine	1 roll
	Brush	5 pcs.	Scrubbing Brush	5 pcs

	Measuring tape	1 pc.	Measuring tape (25m)	1 pc
	Meter stick	5 pcs.	---	
	Sharpening stone	2 pcs.	Sharpening stone	2 pcs

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions.

Note: Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification: **AGRICULTURAL CROPS PRODUCTION NC II**

Existing

3.5 TRAINING FACILITIES

AGRICULTURAL CROPS PRODUCTION NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)				**215.00**
• Student/Trainee Working Space	2.00 x 1.00 per student/trainee	2.00 per student	50.00	
• Learning Resource Center	3.00 x 5.00	15.00	15.00	
• Activity Room (including facilities, wash room, and store room)	2.00 x 3.00	6.00 per student	150.00	
B. Demo Farm				**2,550.00**
• Nursery area • Field plot and Working shed (100sq.m.)	1 x 2 per trainee 10 x 10 per trainee	2 per trainee 100 per trainee	50.00 2500.00	

Amended

SPACE REQUIREMENT	SIZE IN METER	AREA IN SQ.METER	TOTAL AREA IN SQ. METER	GRAND TOTAL AREA IN SQ.METER
A. Permanent Building				**170.30**
Student /Trainee working space	2.00 x 2.00 per student/ trainee	4.00 per student	100	
Learning Resource Center	3.00 x 5.00	15	15	
Facilities/Equipment/Circulation (30% of teaching accommodation)			39.3	
Store Room	4.00x4.00	16	16	
B. Experimental Farm Area				**2,650**
Nursery areas	1.00 x 2.00 per trainee	2 per trainee	50	
Field plot	10x10 per trainee	100 per trainer	2,500	
Working shed			100	

Note: * Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification: **AGRICULTURAL CROPS PRODUCTION NC II**

Existing	Amended
• Must be a holder of National TVET Trainer Certificate I (TM I and Agricultural Crops Production NC II) • Preferably computer literate • Must be physically and mentally fit	• Must be a holder of National TVET Trainer Certificate I (NTTC Level I) in Agricultural Crops Production NC II • Must have 2 years industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
AGRICULTURAL CROPS PRODUCTION NC III	**Description**	**Qty**	**Description**	**Qty**
	Bolos	25 pcs	Bolos	25 pcs
	Broomstick	10 pcs	Broomstick	10 pcs
	Calculator	5 pcs	---	
	Container	5 pcs	Container (large pail)	5 pc
	Cutting tools	5 sets	Cutting tools • Grafting Knife • Parring knife • Picking knife • Pruning shears • Scissors • Pole pruner	5 sets
	Digging tools	5 sets	Digging tools • Shovel • Hole digger • Digging bar • Garden hoe • Metal stake • Light hoe • Pick mattock • Trowel	5 sets
			Soil auger	5 units
	Drying meter	2 pcs	Drying meter	2 pcs
	Dulos	10 pcs	Dulos	10 pcs
	Fruit crate	5 pcs	Fruit crate	5 pcs
	Harvesting tools	5 sets	Harvesting tools • Pole fruit picker • Scythe • Sickle	5 sets
	Knapsack sprayer	5 pcs	---	
	Moisture meter	2 pcs	Soil Moisture Meter	3 units
	Personal protection equipment	5	PPE • Hat • Gloves • Rubber boots • Protective coat • Protective gadgets • Mask	25 sets
	Petri-dish	2 pcs	Petri-dish	5 pcs
	pH meter	3 pcs	pH meter	3 pcs
	Plow	5 pcs	---	

Plumbing tools	2 sets	---	
Post-Harvest treatment tools	5 sets	Post-Harvest treatment tools • Treatment tray • Hands sprayer • Tweezer	5 sets
Rake	5 pcs	Rake	5 pcs
Seed bed	5	---	
Seedling tray	5	---	
Sprinklers	15	Sprinklers	15 pcs
Step ladder	2	Step ladder	2 units
Storage tools/cabinet	2	Tools storage cabinet	2 units
Transplanting tools	25 pcs	---	
Equipment		**Equipment**	
Description	**Qty**	**Description**	**Qty**
Booth/temporary shed	2	---	
Cart (Kariton & paragus)	5 units	Cart (Kariton & paragus)	5 units
Coolroom	1	---	
Comb-tooth harrow	1	---	
Computer with record keeping software applications	5	Computer with record keeping software applications	5 units
Drying oven	1	Drying oven (for disinfection)	1 unit
Harvesting equipment	1	---	
Irrigation system (sprinkler, mist/drip irrigation)	1	Irrigation system (sprinkler)	1 unit
Mower (grass cutter)	1	---	
Over head projector (OHP)	1	LED Projector	1 unit
Portable chain saw	1	---	
Post-Harvest treatment equipment	1	---	
Power sprayer	1	Power sprayer*	1 unit
Propagation Equipment	1	Propagation Equipment*	1 unit
Rotavator	1	---	
Service vehicle	1	---	
Sorting /Grading equipment	1	Sorting/Grading equipment*	1 unit
Spike tooth harrow	2	---	
		Pump and watering hose	1 set
		Knapsack sprayer	1 unit
Materials		**Materials**	
Description	**Qty**	**Description**	**Qty**
Agri bags, plastic	250 pcs.	Agri bags, plastic	250 pcs
Bamboo stick	500 pcs.	Bamboo stick	500 pcs

	Basket	5 pcs.	---	
	Bond paper	5 rims	Bond paper	5 reams
	Catching nets	5 pcs.	Catching nets (1mx1m)	5 pcs
	Clips	3 dozen	Clips	3 dozen
	Coconut dust	5 sacks	Coconut coir	5 sacks
	Compost	5 sacks	Compost	5 sacks
	Fertilizers-various	1 sack of each	Fertilizers-various	
			• Urea fertilizer	1 sack (50kg/sack)
			• Complete fertilizer	1 sack (50kg/sack)
			• Compost fertilizer	1 sack (50kg/sack)
	First aide supplies/medicine	1 kit	First aid supplies/medicine	1 kit
	Flower inducer	5 bottles	---	
	Fungicides	5 bottles	Pesticides	5 bottles
	Growing media (garden soil, sewed sand, compost, soil, manure and sawdust/rice	5 sacks	Growing media (garden soil, compost, manure and sawdust/rice hull)	5 sacks (50kg/sack)
	Killing bottles	5 pcs.	---	
	Marking pens	5 pcs.	Marking pens	5 pcs
	Material Safety Data Sheets	25 pcs.	Material Safety Data Sheets	25 pcs
	Mulching material	5 sacks	Mulching material	5 sacks
	Hair nets	25 m	---	
	Packaging materials, assorted	20	Packaging materials	
			• sack	25 pcs
			• plastic bag	25 pcs
			Twine	1 roll
			Needles (for sewing of sack)	5 pcs
	Pail	5	---	
	Pencil	25	Pencil	25 pcs
	Pens	25	Pens	25 pcs
	Pieces of cloth	5 pieces	---	
	Plumbing supplies	1 set	---	
	Pots	250	Polyethylene bags (various sizes)	20 pcs/size
	Propagation materials e.g. seeds spores, cuttings etc.,	Variety	Propagation materials	
			• seeds	25 pcs
			• cutting	25 pcs
	Rope, (small, med. Large)	3 rolls	---	
	Rubber band	3 boxes	Rubber band	3 boxes
	Rubber knots		---	

	Sacks	25 sacks	---	
	Sample of matured vegetable crops		Sample of specimen crops	3 pcs per specimen crops
	Seed box	5 boxes	Seed box	5 boxes
	Seedlings, assorted		Seedlings, assorted	
	Seeds	2 packs per crop	Seeds	2 packs per crop
	String	5 rolls	String	5 rolls
	Tetrazolium chemical	5 bottles	---	
	Transplanting supplies		---	
	Detergent, liquid and powder soap	5 pcs.	Detergent, liquid and powder soap	5 pcs
	Brush	5 pcs.	Brush	5 pcs

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions.

Note: Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification : AGRICULTURAL CROPS PRODUCTION NC III

Existing

3.5 TRAINING FACILITIES
AGRICULTURAL CROPS PRODUCTION NC III

Based on a class intake of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. **Building (permanent)**			170.30
• Student/Trainee Working Space	2.00 x 2.00 per student/trainee	4.00 per student	100.00
• Learning Resource Center	3.00 x 5.00	15.00	15.00
• Facilities/Equipment/Circulation (30% of teaching accommodation)			39.30
• Store Room	4.00 x 4.00	16.00	16.00
B. **Experimental Land Area**	5 sq m /trainee	125.00	125.00

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)			**170.30**
• Student/Trainee Working Space	2.00 x 2.00 per student/ trainee	4.00 per student	100
• Learning Resource Center	3.00 x 5.00	15	15
• Facilities/Equipment/Circulation (30% of teaching accommodation)			39.3
• Store Room	4.00 x 4.00	16	16
B. *Experimental Farm Area	5 sq m /trainee	125	**125**
C. *Farm area with established crop	5 sq m /trainee	125	**125**
		Total	**593.30**

Note: * Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification: AGRICULTURAL CROPS PRODUCTION NC III

Existing

- Must be a holder of NC III
- Must have undergone training on Training Methodology III (TM III)
- Must be physically and mentally fit
- *Must have at least 2 years job/industry experience

Amended

- Must be a holder of National TVET Trainer Certificate I (NTTC I) in Agricultural Crops Production NC III; and
- Must have at least 2 years industry experience within the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
AGRICULTURAL MACHINERY OPERATION NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Set of box wrench, 8 pieces	5 sets	Set of box wrench, 8 pieces	5 sets
	Sets Allen wrench	5 sets	Sets Allen wrench	5 sets
	Steel tape measure	5 pcs	Steel tape measure	5 pcs
	Ballpeen hammer	5 pcs	Ball Peen hammer	5 pcs
	Vice grip	5 pcs	Vice grip	5 pcs
	Pliers	5 pcs	Pliers	5 pcs
	Pliers, long nose	5 pcs	Pliers, long nose	5 pcs
	C-clamp	5 pcs	C-clamp	5 pcs
	Locking Pliers	5 pcs	Locking Pliers	5 pcs
	Grease Guns	5 pcs	Grease Guns	5 pcs
	Sets Flat screw driver	5 sets	Sets Flat screw driver	5 sets
	Sets Philips screw driver	5 sets	Sets Philips screw driver	5 sets
	24” adjustable wrench	5 pcs	24” adjustable wrench	5 pcs
	Scythe	5 pcs	Scythe	5 pcs
	Tachometer	2 units	Tachometer	2 units
	Measuring can	5 pcs	Measuring can	5 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Power sprayer	1 unit	Power sprayer	1 unit
	Boom Sprayer	1 unit	Boom Sprayer	1 unit
	Sprayer, knapsack, stainless 16 Liters	1 unit	Sprayer, knapsack, stainless 16 Liters	1 unit
	Hand tractor Hand tractor, 10 hp diesel engine with	1 unit	*Hand tractor	1 unit
	Harvester, 1.2 meter reaper	1 unit	*Harvester	1 unit
	Wheel tractor	1 unit	*4-Wheel tractor	1 unit
	Irrigation pump, 2 x 2, 5.5 HP gasoline	1 unit	*Irrigation pump (gasoline/diesel)	1 unit
	Irrigation pump, 4 x 4, 10 HP diesel	1 unit	---	
	Grass cutter	1 unit	*Grass cutter	1 unit
	Thresher	1 unit	*Thresher	1 unit
	Sheller	1 unit	*Sheller	1 unit
	Decorticator	1 unit	*Decorticator	1 unit
	Size reduction machine/mill	1 unit	*Size reduction machine/mill	1 unit

	Dehusker/depulper	1 unit	*Dehusker/depulper	1 unit
	Dryer	1 unit	*Mechanical Dryer	1 unit
	Air compressor	1 unit	*Air compressor	1 unit
	Pressurized water sprayer	1 unit	---	
	Weighing Scale (100kg)	1 unit	Weighing Scale (100kg)	1 unit
	Weighing Scale, 30 kg capacity	1 unit	Weighing Scale (30 kg)	1 unit
	Weighing Scale (10kg)	2 units	Weighing Scale (10kg)	2 units
	Thermometer	5 units	Thermometer	5 units
	Moisture meter	2 units	Moisture meter	2 units
			Tachometer (digital)	2 units
	Agricultural - Implements		**Agricultural - Implements**	
	Moldboard /disc plow	1 unit	*Moldboard /disc plow	1 unit
	Harrow	1 unit	*Harrow	1 unit
	Trailer (for transport of implements of hand tractor)	1 unit	*Trailer (for transport of implements of hand tractor)	1 unit
	Rotavator	1 unit	*Rotavator	1 unit
	Leveller	1 unit	*Leveller	1 unit
	Seeder/Planter/Di gger	1 unit	*Seeder/Planter/Digger	1 unit
	Weeder/Cultivator	1 unit	*Weeder/Cultivator	1 unit
	Diesel engine (single cylinder engine) - 5 Hp	1 unit	*Diesel engine (single cylinder engine) - 5 Hp	1 unit
	Gasoline engine (single cylinder) - 5 Hp	1 unit	*Gasoline engine (single cylinder) - 5 Hp	1 unit
	Agricultural - Accessories		**Agricultural - Accessories**	
	Guide stick	1 pc	Guide stick	1 pc
	Floater	1 pc	---	
	Furrow opener and closer	1 pc	---	
	Pressure gauge	1 unit	Pressure gauge	1 unit
	Lance	1 unit	---	
	Box –Nozzle (different sizes)	1 set	---	
	Hose	10 meters	---	
	Grease	5 Liters	Grease	5 L
	Sanding paper #220	25 pcs	Sanding paper #220	25 pcs
	Pipe connector	5 pcs	Pipe connector	5 pcs
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Rubber Boots	25 pcs	Rubber Boots	25 pcs
	Dust Mask	25 pcs	Dust Mask	25 pcs
	Hand Gloves	25 pcs	Hand Gloves	25 pcs
	Earmuff/Earplug	25 pcs	Earmuff/Earplug	25 pcs

	Hand Gloves, cotton knitted rubber coated	25 pcs	Hand Gloves, cotton knitted rubber coated	25 pcs
	Long Sleeve Shirt	25 pcs	Long Sleeve Shirt	25 pcs
	Cover all clothing	25 pcs	Cover all clothing	25 pcs
			Goggles	25 pcs
	First Aid kit	1 set	First Aid kit	1 set
	Teflon Tape	3 roll	Teflon Tape	3 rolls
	Fuel and Oil	20 L	Fuel and Oil	20 L
	Engine Base	1 pair	Engine Base	1 pair
	Belt	2 pcs	Belt	2 pcs
	Pulley	1 pc	Pulley	1 pc
	Rags	10 kg	Rags	10 kg
	Seeds	10 kg	Seeds	10 kg
	Plastic twine	3 rolls	Plastic twine	3 rolls
	Sacks (for seeds and waste)	5 pcs	Sacks (for seeds and waste)	5 pcs
	Planting materials	20 kg	Planting materials	20 kg
	Crop samples	5 kg	Crop samples	5 kg
	Fertilizer	1 bag	Fertilizer	1 bag
	Chemicals assorted	3L	Chemicals assorted	3 L
	Office supplies		**Office supplies**	
	Envelope	25 pcs	Envelope	25 pcs
	Bond Paper	3 rims	Bond Paper	3 rims
	White Board	1 pc	White Board	1 pc
	White Board Marker	5 pcs	White Board Marker	5 pcs
	Pen Maker	15 pcs	Pen Maker	15 pcs
	Pad Paper	5 pads	Pad Paper	5 pads

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions.

Note: Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

II. B - TRAINING FACILITIES (TF)

<table>
<tr><th colspan="2">AGRICULTURAL, FORESTRY AND FISHERY SECTOR</th></tr>
<tr><th>Qualification :</th><th>AGRICULTURAL MACHINERY OPERATION NC II</th></tr>
<tr><th>Existing</th><th>Amended</th></tr>
<tr><td>

3.5 TRAINING FACILITIES

AGRICULTURAL MACHINERY OPERATION NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)				**150**
• Student/Trainee Working Space	2.00 x 2.00 per student/trainee	4.00 per student	100.00	
• Lecture Room	7.00 x 5.00	35.00	35.00	
• Learning Resource Center	3.00 x 5.00	15.00	15.00	
B. Demo Farm				**5,200**
• Machinery Shed	10 x 20	200	200	
• Field Area	100 x 50	5,000	5,000	
			TOTAL AREA	**5,350.00**

Note: Access to and use of equipment/facilities can be provided through cooperative arrangements of MOA with other partner-companies/institutions.

</td><td>No Amendments</td></tr>
</table>

II. C – TRAINER'S QUALIFICATION (TQ)

<table>
<tr><th colspan="2">AGRICULTURAL, FORESTRY AND FISHERY SECTOR</th></tr>
<tr><th>Qualification:</th><th>AGRICULTURAL MACHINERY OPERATION NC II</th></tr>
<tr><th>Existing</th><th>Amended</th></tr>
<tr><td>

- Must be a holder of BS Agricultural Engineering and National Certificate holder of Trainer's Methodology level I (TMI) or must be a holder of NTTC I in Agricultural Machinery Operation NC II
- Must have at least 2 years job/industry experience for the last five (5) years

</td><td>

- Must be a holder of National TVET Trainer Certificate I (NTTC I) in Agricultural Machinery Operation NC II;
- Must be a graduate of BS Agricultural Engineering/ Agricultural and Biosystems Engineering (ABE); and
- Must have at least two (2) years job/industry experience within the last five (5) years

</td></tr>
</table>

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ANIMAL PRODUCTION (RUMINANTS) NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Weighing scale (1000 kg. cap.) Small ruminants - 200 kg capacity	3 pcs	Weighing scale, 1000 kg capacity	1 pc
			Weighing scale, 200 kg capacity (Small ruminants)	1 pc
	Tattoo pliers, hammer Syringes (5 to 20ml cap.)	5 pcs	Tattoo plier/ Ear tagger/ Ear applicator	2 pcs
	Shovel, wheel barrow	5 pcs	Shovel	5 pcs
			Wheel barrow	2 pcs
	Mineral boxes, waterer, feeding trough	15 pcs	---	
	Milking pails	10 pcs	Stainless milking pails	10 pcs
	Ear applicator	5 pcs	---	
	Elastrator	5 pcs	Elastrator	5 pcs
	Hot iron dehorner	5 pcs	Hot iron dehorner	5 pcs
	Hoof trimmer	5 pcs	Hoof trimmer	5 pcs
	Knife cutter	5 pcs	Knife cutter	5 pcs
	Burdizzo	1 pc	Burdizzo	1 pc
	Planting tools	5 sets	Planting tools (for forage pasture development)	5 sets
	Carpentry tools	5 sets	Carpentry tools	5 sets
	Garden hose	12 m	Garden hose	12 m
	Models/Actual Objects		**Large Ruminants**	
	Dairy Cattle	5 pcs	Dairy type	5 units
	Beef Cattle	5 pcs	Meat type	5 units
	Buffaloes	5 pcs	**Small Ruminants**	
	Dairy goat	5 pcs	Dairy type	5 units
	Meat-type goat	5 pcs	Meat type	5 units
	Sheep	5 pcs	---	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Electric disbudder	2 units	*Electric disbudder	2 units
	Electric shearer	2 units	*Electric shearer	2 units
	Hoof grinder	2 units	*Hoof grinder	2 units
	Fire extinguisher	2 units	Fire extinguisher	2 units
	Foot baths	1 unit	Foot baths	1 unit/ house
	Forage chopper	1 unit	*Forage chopper	2 units

	Shredder	1 unit	---	
	Double broiler	5 units	Double broiler	5 units
	Stancheon	1 unit	Stancheon	1 unit
	Chute	1 unit	Chute	1 unit
	Refrigerator	1 unit	Refrigerator	1 unit
	Audio-visual	2 sets	Audio-visual	2 sets
	Water system	1 unit	Water system (component of housing)	1 unit
	Water tank, 1,000 gal. capacity	1	Water tank, 1,000 gal. capacity	1unit
			Brush cutter	1 unit
	Learning Materials		---	
	Manuals		---	
	Books		---	
	References		---	
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Medicines (vitamins and anti-biotics)	25 bottles	Medicines (vitamins and antibiotics)	25 bottles/ units
	Dewormer	25 bottles	Dewormer	25 bottles
	Vaccines and syringes	25 pcs	Syringes • 5 ml capacity • 20ml capacity	25 pcs per type
			Vaccines	25 pcs
			Mineral supplements in block form	3 sets/5kg per block
	PPE: · Dust coats · Mask · Hand gloves · Boots · Rain coats	25 sets	PPE: • Dust coats • Mask • Hand gloves • Boots • Rain coats	25 sets
	Supplemental feeds	50 kilos	Supplemental feeds	50 kilos
	Ear tags, branding iron	25 pcs	Ear tags	25 pcs
	Disinfectant	3 bot.	Disinfectant	3 bot.
	Detergent	10 sachet	Detergent	10 sachets
	Scrub	5 pcs	Scrub	5 pcs
	Broom	5 pcs	Broom	5 pcs
	Trash cans	6 pcs	Trash cans	5 pcs
	Hand soap/sanitizer	5 bar	Hand soap/sanitizer	5 bar/bot.
	Ice –crushed (for water bath after pasteurization)	1 block	Ice –crushed (for water bath after pasteurization)	1 block
	Milk bottles	50 pcs	Milk bottles	50 pcs

	Hairnet (milking)	25 pcs.	Hairnet (milking)	25 pcs
	Working gloves (silage making)	25 pcs.	Working gloves (silage making)	25 pcs
	Disposable gloves (for AI)	25 pcs	Disposable gloves (for AI)	25 pcs
	Forage planting materials	5x 25/ species	Forage planting materials (cuttings, root stock and seeds)	2500 pcs
	Organic Fertilizer	20 sacks (50 k each)	Organic Fertilizer	20 sacks (50 kg/ sack)
			Nylon Rope (#20/10mm)	10 m
			California Mastitis Test Kit (milking)	5 pcs

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions

Note: Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification :	**ANIMAL PRODUCTION (RUMINANTS) NC II**

Existing

3.5 TRAINING FACILITIES

ANIMAL PRODUCTION (RUMINANTS) NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. M
• Building (permanent) with facilities	13.00 x 15.00	195		195
○ Student/Trainee Working Space	2 x 2 per student/trainee	4 per student	100	
○ Lecture Room	8 x 5	40	40	
○ Learning Resource Center	3 x 5	15	15	
○ Kitchen	4 x 5	20	20	
○ Storage room	4 x 5		20	

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• Animal Housing with facilities ○ Milking parlor ○ Corral ○ Drinking and feeding through ○ Pens ○ Silo	8 x 30	240		240
• Farm area (overall area with the building ,animal housing, waste disposal area and other facilities	10 has.			10 has.
○ Forage and pasture area	2 has.		2 has.	

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METER	TOTAL AREA IN SQ. METER	GRAND TOTAL AREA IN SQ.METER
A. PERMANENT BUILDING				**195**
Student/Trainee Working Space	2 x 2 per student/ trainee	4 per student	100	
Lecture Room	8 x 5	40	40	
Learning Resource Center	3 x 5	15	15	
Kitchen	4 x 5	20	20	
Storage room	4 x 5		20	
B. ANIMAL HOUSING WITH FACILITIES ● Milking parlor ● Corral ● Drinking and feeding trough ● Pens ● Silo (sack/drum) ● waste disposal and other facilities	8 x 30	240		**240**
● Forage and pasture area - Cut and carry system	20,000		20,000 (includes improve pasture)	**20,000**
			Total	**20,435**

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification:	**ANIMAL PRODUCTION (RUMINANTS) NC II**

Existing	Amended
● Must be a holder of National TVET Trainer Certificate I (TM I and NC) ● Preferably computer literate ● Must be physically and mentally fit	• Must be a holder of National TVET Trainer Certificate I (NTTC I) in Animal Production (Ruminants) NC II; and • Must have 2 years industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ARTIFICIAL INSEMINATION (SWINE) NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Catheters	100 pcs.	Catheters, disposable	100 pcs
	First aid kit	1 set	First aid kit (cotton, betadine, plaster)	1 set
	Training bag	12 pcs.	---	
	Shovel	1 pc	Shovel, flat tip	1 pc
	Sandbag	1 pc	Breeding buddy insemination holder	10 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Microscope	4 units	Microscope, light compound, with monitor	2 units
	Personal Protective Paraphernalia (scrub suits, powderfree vinyl gloves, rubber boots)	12 sets	PPE: • scrub suits • powder free vinyl gloves • rubber boots • laboratory gown	12 sets
	Vehicle	1 unit	Vehicle	1 unit
	Camera	1 unit	Camera	1 unit
	Power sprayer	1 unit	Power sprayer	1 unit
	Generator set	1 unit	Generator set	1 unit
	Refrigerator (16 to 17 degree C)	1 unit	Refrigerator (16 to 17 degree C)	1 unit
	Fire extinguisher	1 unit	Fire extinguisher, ABC	1 unit
	Set Audio visuals with screen	1 unit	Set Audio visuals with screen	1 set
	White board	1 unit	White board	3 units
	Chairs and tables	12 sets	Chairs and tables	12 sets
	Computer	2 Units	Computer/Laptop	2 units
	Printer	1 unit	Printer with photocopier	1 unit
	Dryer-Sterilizer	1 unit	Add. Warmbath Stainless steel (14 L Capacity)	1 unit
	Semen transport box	1 unit	Mobile semen storage box	1 unit
	Models/actual objects		**Models/actual objects**	
	Practice animals (boar)	6 units	Practice animals (boar)	5 heads
	Practice animals (Sow/gilt)	5 units	Practice animals (Sow/gilt)	10 heads
	Dummy sow	1 unit	Dummy sow	1 unit
			Laboratory thermometer, 14”	6 units
			Semen photometer	1 unit

			Pipette, glass, 10ml	4 pcs
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Semen bottles	50 bottles	Semen bottles, 100ml squeeze bottle with cap	50 bottles
			Face mask, surgical/ disposable	1 box
			Hair net	100 pcs
			Syringe, disposable, 5ml	10 pcs
			Animal marker, green and red	2 pcs
			Stirring rod, glass	6 pcs
			Beaker, plastic with handle, 2L	6 pcs
			Wash bottle, 250ml	2 pcs
	Female Reproductive Organ Specimens	1pc	Female Reproductive Organ Specimens	1 pc
	Pail and dipper	2 sets	Pail and dipper, small	2 sets
	Hose	10 m	Hose with nozzle	10 m
	Isopropyl alcohol (70%)	6 bottles	Isopropyl alcohol (70%), 500ml	6 bottles
	Germicidal Soap	6 pcs.	Germicidal liquid, 500ml	6 pcs
	Paper towels	6 packs	Paper towels	6 packs
	Glass slides	5 boxes	Glass slides	5 boxes
	Cover slips	5 boxes	Cover slips	5 boxes
	Trash can	2	Trash can with cover, plastic, medium size	3 units
	Disposal waste bags	50 pcs.	Disposal waste bags, medium size	50 pcs
	Broomstick	2 pcs.	Broomstick	5 pcs
	Brooms	2 pcs.	Brooms	2 pcs
	Brush	6 pcs.	Test Tube Brush	6 pcs
	Board marker	6	Whiteboard marker, assorted	6 pcs
			Marker, permanent, assorted	6 pcs
	MaskingTapes	2 rolls	Masking tape, 1”	2 rolls
	Pencil/ballpen	12 pcs	Ballpen, black	12 pcs
	Bond paper	5 rims	Bond paper, A4	5 reams
	Pheromones	2 spray bottles	Pheromones	2 spray bottles
	Semen (for the snout for heat detection)	2 bottles	Semen (for the snout for heat detection)	2 bottles
	Semen (for AI)	100 bottles	Semen (for AI)	25 bottles
	Pre-warmed collecting cup	4 pcs	Collecting cup	4 pcs
	Semen filter	1 box	Semen filter	1 box
	Rubber band	1 box	Rubber band	1 box
	Distilled water	30 L.	Distilled water	30 L

	Plastic gloves	1 box	Plastic gloves	1 box
	Nutrient agar plates	12 pcs.	Nutrient agar plates	12 pcs
	Lubricant	2 bottles	Lubricant, 250ml	2 bottles
	Laboratory thermometer	4	Laboratory thermometer	4 pcs
	Ice		Refrigerant Gel, rectangular, flat packs, 400ml	6 pcs
	Damp cloth/ used newspaper		Used newspaper	1 kilo
	Tissue paper	6 rolls	Tissue paper	1 box
	Learning Materials		**Learning Materials**	
	Training manuals	12 pcs	Training manuals	12 pcs
	Animal charts	1	Animal chart, parts	1 pc
	Animal breeds	1	Animal breeds	1 pc
	Video materials	1	Video materials	1 pc
	Forms(animal information sheets, sow card, boar card)	12 pcs	Forms (animal information sheets, sow card, boar card)	12 pcs

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions

Note: Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification : ARTIFICIAL INSEMINATION (SWINE) NC II

Existing

3.5 TRAINING FACILITIES

ARTIFICIAL INSEMINATION (SWINE) NC II

Based on a class size of 12 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	TOTAL AREA IN SQ. METERS
• Collecting pen	2 x 3	6
• Boar pen	3 x 4 per animal x 6	72
• Sow/gilt stall	2 x 0.65 x5 animal	6.6
• Gilt's pen	1 .1 sq.m. per head x 5	5.5
• Lecture Room	7.00 x 5.00	35.00
• AI Laboratory room	6 x 8	48
• Storage room	4 x 3	12
• Learning resource center	3 x 4	12

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)			**131**
• Lecture Room/Workshop	7.00 x 5.00	35	
• Learning Resource Center	3 x 4	12	
• Activity Room			
- Wash/ Lavatory room	3 x 4	12	
- Store room	4 x 3	12	
- Rest room (male, female & PWD)	3 x 4	12	
• Facilities/ Equipment/ Circulation Area (30% of teaching accommodation) • AI Laboratory room	6 x 8	48	
B. Boar Center			**99.50**
• Collecting pen	3 x 3	9	
• Boar pen	3 x 4 per animal x 6	72	
• Sow/gilt stall	2 x 0.65 x 5 per animal x2	13	
• Gilt's pen	1.1 sqm per head x 5	5.5	

* Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification: ARTIFICIAL INSEMINATION (SWINE) NC II

Existing

- Must be a holder of Artificial Insemination NC II or Animal Science Graduate
- Must have undergone training on Training Methodology I (TM I)
- *Must be computer literate
- Must be physically and mentally fit
- *Must have at least 2 years job/industry experience

Amended

- Must be a holder of National TVET Trainer Certificate I (NTTC I) in Artificial Insemination NC II; and
- Must have at least 2 years job/industry experience within the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
FISH CAPTURE NC I	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Netting needles: Bone	25	Knitting needles: bone	25 pcs
	Netting needles: Flat	25	Knitting needles: flat	25 pcs
	Knives	25	Knives (small)	25 pcs
	Scissors	25	Pair of fishing net scissors	25 pcs
	Marked rod	25	Marked rod (improvised marking instruments)	25 pcs
	Mesh gauge	25	Mesh gauge (depends on the desired mesh – species of fish) ex. galungong (10 Knots= 3.3 cm); smaller K = larger mesh size	25 pcs
	Ruler	25	Ruler	25 pcs
	Stands	25	Stands	25 pcs
	Tensioning devices	25	Tensioning devices	25 pcs
	Hot and cold hoses	1	Hot and cold flexible hoses (at least 2 inches in diameter)	1 pc
	Brooms, mops and shovels	25	Brooms, mops and shovels	5 pcs
	Cleaning cloths	25	Cleaning cloths	25 pcs
	Bins and tubs	25	Fish tubs (banyera)- 30 kg capacity-polyethylene (PE) plastic	5 pcs
	Brushes	25	Deck scrub brush with handle	5 pcs
	Cleaning buckets	25	---	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Fishing vessel	1 unit	Fishing vessel (3 GT above-commercial fishing)	1 unit
	Flags	2 pcs.	Flags	2 pcs
	Flares	5 pcs.	Flares	5 pcs
	Lights	5 pcs.	Lights	5 pcs
	Two-way radio	5 pcs.	---	
	Electronic equipment	2 units	---	
	Net haulers	1 unit	Net hauler	1 unit
	Pot or trap haulers	1 unit	Line (pot or trap haulers)	1 unit
	Anchor winches	1 unit	Anchor winche	1 unit
			Fire extinguisher	1 unit
			Mechanical powered winch	1 unit

			Capstan	5 units
			Windlass	5 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Wire rope		Wire rope (cable wire)- 18 mm in diameter	5 m
	Cable and rope winches	5	Cable and rope winches	1 unit
	Three, four or eight-strand rope	1	Three-strand rope (5 m/trainee)	125m
			Four-strand rope (5 m/trainee)	125m
			Eight-strand rope (5 m/trainee)	125m
	Strengthening ropes	25	Strengthening ropes	25m
			Polyethylene or polypropeline hanging lines/lead lines – Gill net- 5 to 7 mm	25m
			Trawl – 3mm (#6)	
			Gill netting	25m
	Gill netting: monofilament	25	Gill netting: PA monofilament (10K ◊, 100m x 100MD)	5 bales
	Trawl and purse seine netting: knotted	25	PE nettings, 400d/6, 10k x 100m x 100 MD	1 bale
			Purse seine	
	Trawl and purse seine netting: knotless	25	PA multifilament nettings, 210d/6 x 11k x 100m x 100 MD	1 bale
	Trawl and purse seine netting: braided twine	25	Trawl Netting Twine: PA, 210/4	5 spools
	Trawl and purse seine netting: twisted twine	25	**---**	
	Trawl and purse seine netting: polyethylene (PE)	25	Polyethylene (PE) – 5mm diameter	25 spools/ coil
	Trawl and purse seine netting: polyamide (nylon) (PA)	25	Polyamide (nylon) (PA)	25 spools
			Purse Seine Netting Twine: • Polyethylene (PE) • Polyamide (nylon) (PA)	25 spools/ coils each item
	Thermal and waterproof clothing	25	Thermal and waterproof clothing	25 pcs
	Thermal and protective hand covering	25	Thermal and protective hand covering	25 sets
	Thermal and protective hair or beard cover	25	Thermal and protective hair or beard cover	25 pcs
	Thermal and protective waterproof footwear	25	Thermal and protective waterproof footwear	25 pairs
	Eye protection	25	Eye protection	25 pcs
	Cleaning and sanitizing chemicals and agents	25	Cleaning and sanitizing chemicals and agents	25 sets
			References:	

	Food Safety Program	25	Food Safety Program	25 pcs
	Material Safety Data Sheet	25	Material Safety Data Sheet	25 pcs
	OHS Requirements	25	OHS Requirements	25 pcs

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification : FISH CAPTURE NC I

Existing

3.5 TRAINING FACILITIES

FISH CAPTURE NC I

Based on a class size of 25 students/trainees.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. **Building (permanent)**			170.30
• Student/Trainee Working Space	2.00 x 2.00 per student/trainee	4.00 per student	100.00
• Learning Resource Center	3.00 x 5.00	15.00	15.00
• Facilities/Equipment/Circulation (30% of teaching accommodation)			39.30
• Store Room	4.00 x 4.00	16.00	16.00
B. **Experimental Deck Area**			90
Total Area			430.60

Note: Experimental area will change according to availability of land.

Amended

No Amendments

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification:	**FISH CAPTURE NC I**
Existing	**Amended**
● Must be a holder of Fish Capture NC II or its equivalent ● Must have undergone training on Training Methodology I (TM I) ● Must be computer literate ● Must be physically and mentally fit ● *Must have at least 2 years job/industry experience ● Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission) * Optional. Only when required by the hiring institution.	• Must be a holder of National TVET Trainer Certificate I (NTTC I) in Fish Capture NC II; and • Must have at least 2 years of industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
FISHING GEAR REPAIR AND MAINTENANCE NC III	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Knives	25	Knives (small)	25 pcs
	Scissors	25	Pair of fishing net scissors	25 pcs
	Netting needles	25	Knitting needles	25 pcs
			Meter stick	5 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Personal Protective Gear - Hard hat - Hand cover - Safety footwear	25 sets	Personal Protective Gear • Hard hat • Hand cover • Safety footwear	25 sets
	Fishing vessel	1 unit	Fishing vessel	1 unit
	Net hauler	1 unit	Utility Crane	1 unit
			Megaphone/2-way handheld radio	1 set
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Gear plan	5	Gear plan	5 pcs
	Purse seine net	1	Purse seine net	25 m
	Twine	25	Twine	25 spools
	Paper and pen	5	Notepad	5 pcs
			Pen	5 pcs
	Rope	25	Cargo Rope (18mm/20mm)	50 m
			Marking twine (must have different color of the net)	1 spool

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification : FISHING GEAR REPAIR AND MAINTENANCE NC III

Existing

3.5 TRAINING FACILITIES
FISHING GEAR REPAIR AND MAINTENANCE NC III

Based on a class intake of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)			
Student/Trainee Working Space	2.00 x 2.00 per student/trainee	4.00 per student	100.00
Learning Resource Center		15.00	15.00
Facilities/Equipment/ Circulation			39.30
Store Room	4.00 x 4.00	16.00	16.00

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)			**170.3**
Student/Trainee Working Space	2.00 x 2.00 per student/ trainee	4.00 per student	100
Learning Resource Center		15	15
Facilities/Equipment/ Circulation			39.3
Store Room	4.00 x 4.00	16	16
B. Experimental Area			**90**

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR

Qualification: FISHING GEAR REPAIR AND MAINTENANCE NC III

Existing

- Must be a holder of NC III
- Must have undergone training on Training Methodology III (TM III)
- Must be physically and mentally fit
- *Must have at least 2 years job/industry experience *

Optional. Only when required by the hiring institution

Amended

- Must be a holder of National TVET Trainer Certificate I (NTTC I) in Fishing Gear Repair and Maintenance NC III; and
- Must have at least 2 years of industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
MILKING OPERATION NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Milk can (40 liters)	5 pcs	Milk can (40 liters)	5 pcs
	Milk can (20 liters)	5 pcs	Milk can (20 liters)	5 pcs
	Milk can (10 liters)	5 pcs	Milk can (10 liters)	5 pcs
	Bucket (10 L)	5 pcs	Bucket (10 L)	5 pcs
	Milking stool	5 pcs	---	
	Teat dipper	5 pcs	Teat dipper	5 pcs
	calculator	5 units	---	
	Thermometer	5 units	---	
	Hands spray	5 pcs	Hands spray	5 pcs
	Mastitis test kit	5 pcs	Mastitis test kit	5 pcs
	Measuring cup	5 sets	Measuring cup	5 sets
	Strip cup	5 pcs	Strip cup	5 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Milking machine (Bucket type)	2 units	Milking machine	2 units
	Milking machine (Herringbone type)	1 unit	---	
	Weighing Scale	1 unit	Weighing Scale	1 unit
	Chilling tank	1 unit	Chilling tank	1 unit
	Laptop	1 unit	Laptop	1 unit
	Audio-visual system	1 unit	Audio-visual system	1 unit
	Washing machine with dryer	1 unit	Washing machine with dryer	1 unit
			Practice Lactating Animal Any of the following: • Cow • Carabao • Goat	3 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Cheesecloth	10 pcs	Cheesecloth	10 pcs
	Face towel	5 pcs	Face towel	5 pcs
	Paper towel	5 rolls	Paper towel	5 rolls
	Chlorine	2 L	Chlorine	2 L
	Scouring Pads	5 pcs	Scouring pads	5 pcs

	Push Brush	5 pcs	Push brush	5 pcs
	Mild liquid detergent	2 L	Mild liquid detergent	2 L
	Teat dip solution (iodine-10%)	1 L	Teat dip solution (iodine-10%)	1 L
	Nitric Acid	2 L	Nitric Acid	2 L
	Logbook	25	Logbook	25 pcs
	Ballpen	25	Ballpen	25 pcs
	Sodium hypochlorite (chlorox)	2 L	Sodium hypochlorite (chlorox)	2 L
	Phosphoric acid	2 L	Phosphoric acid	2 L
	Caustic soda	500 g	Caustic soda	500 g
	Milkers Training Clothes (cover all)	25 (or 50) for replacement	Milkers Training Clothes (cover all)	25 pcs
	Rubber Boots	25 pairs	Rubber boots	25 pairs
	Head Cap	25 pcs	Head cap	25 pcs
			Mask	25 pcs

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification :	**MILKING OPERATION NC II**

Existing

3.5 TRAINING FACILITIES

MILKING MACHINERY OPERATION NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)				**215.00**
• Student/Trainee Working Space	2.00 x 1.00 per student/trainee	2.00 per student	50.00	
• Comfort room			12.00	
• Learning Resource Center	2x1	2	50	
B. Milking Parlor and facilities				**2,550.00**
• Store room				
• CR and shower room	3.00 x 4.00		12.00	
• Locker room	4.00 x 4.00		16.00	
• Laundry room	3.00 x 4.00		12.00	
• Milking area	3.00 x 4.00		12.00	
• Waiting area	10.00 x 7.00		70.00	

NOTE: Access to and use of equipment /facilities can be provided through cooperative arrangements or MOA with other partner-farms/companies.

Amended

No Amendments

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification:	**MILKING OPERATION NC II**

Existing	Amended
• Must be a holder of National TVET Trainer Certificate in Milking Operation NC II or preferably graduate of Animal Science and related areas or graduate of Agricultural Engineering/Agricultural Biosystems Engineering with TM I • Must have two (2) years industry experience for the last five (5) years	• Must be a holder of National TVET Trainer Certificate I (NTTC I) in Milking Operation NC II; and • Must have two (2) years industry experience for the last five (5) years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AGRICULTURAL, FORESTRY AND FISHERY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ORGANIC AGRICULTURE PRODUCTION NC II	**Equipment**		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Desktop Computer	5 sets	Computer (desktop or laptop)	3 units
	Printer	1 unit	Printer	1 unit
	LCD projector with Screen	1 unit	LCD projector with Screen	1 set
	Photo Copier	1 unit	---	
			Shredder	1 unit
			Fire Extinguisher	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
			First Aid Kit	1 unit
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**
	Brochures		Brochures	
	Visual aids		Visual aids	
	Reference manuals		Reference manuals	
	Procedural manuals		Procedural manuals	
	Instructional supplies and materials		Instructional supplies and materials	
	Reference materials/books/ VPM		Reference materials/books/ VPM	
	Data (result of soil analysis)		Data (result of soil analysis)	
	Soil samples		Soil samples	
	Reference materials-PNS (livestock) -animal welfare -GAHP		Reference materials-PNS (livestock) -animal welfare -GAHP	
	PPEs		**PPEs**	
	Description	**Qty**	**Description**	**Qty**
	Goggles		Goggles	25 pcs
	Long Gloves/ Arms Length		Long Gloves/Arms Length	25 pcs
	Face Mask # 30		Face Mask # 30	25 pcs
	Overall Suit		---	
	Hair net		Hair net	25 pcs
	Safety Shoes		Safety Shoes	25 pcs
	Rubber Boots		Rubber Boots	25 pcs
	Wide Brimmed Hats		Wide Brimmed Hats	25 pcs
	Long Sleeves		Long Sleeves Shirt	25 pcs

	Long Pants		Long Pants	25 pcs
			Apron	25 pcs
			Raincoat	25 pcs
	COC 1: RAISE ORGANIC CHICKEN			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Bolo	5 pcs.	Bolo	5 pcs
	Broomstick	5 pcs.	Broomstick	5 pcs
	Plastic Pail (10 liter. capacity)	5 pcs.	Plastic pail, 6L cap.	5 pcs
			Chopping board	5 pcs
			Water container drum, 200L cap.	1 pc
	Carpentry tools	1 set	Basic Carpentry tools -hammer -chisel -saw -measuring tape	2 sets
	Knapsack sprayer	2 units	Knapsack sprayer	2 units
	Storage Container with cap,15 liter capacity	5 pcs.	Storage container with cap, 20L cap.	5 pcs
	Weighing scale, 2 kilos capacity (2); 25 kilos capacity (1)	3 units	Weighing scale, 2 kg cap.	2 units
			Weighing scale, 25 kg cap.	1 unit
	Shovel	5 pcs.	Shovel	5 pcs
	Knives	5 pcs.	Knives	5 pcs
	Sprinklers, 5 liters	2 pcs.	Sprinklers, 5L	2 pcs
	Step ladder 6 ft.	1 units	Step ladder, 6 ft.	1 unit
	Storage tools/cabinet	1 unit	Storage tools/cabinet	1 unit
	Feeding trough	5 pcs.	Feeding trough	5 pcs
	Waterer/drinker, 1 liter capacity	5 pcs.	Waterer/drinker, 1L cap.	2 pcs
	Plastic cup, 1 liter capacity	5 pcs	Plastic cup, 1L cap.	5 pcs
	Waste cans/bag	3 pcs.	Waste cans/bag	3 pcs
			Water on demand facility (new technology)	1 unit
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
	Shredder	1 unit	**Shredder	1 unit
	Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
	Cart	1 unit	---	
	Wheel barrow	1 unit	Wheel barrow	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**

	Feeds: starter,	15 Kg.	Feeds: starter	5 kg
	Feeds: grower	15 Kg.	Organic feeds: grower	5 kg
	21-day old chicks	25 pcs	21-day old chicks (organic)	25 heads
	Rice Hull	8 Bags of 50kgs	Rice hull or saw dust or coco dust	5 sacks of 20 kgs
	Sand	1 Bag of 50kg. Soil	Sand	1 Bag of 50 kg
	Net, #10 mesh size	50 meter	Net, #10 mesh size	50 meter
	Various Concoctions/ Extracts	5 liters	Various Concoctions/ Extracts	5 liters
	Feeds: finisher	15 Kg.	Organic feeds: finisher	5 kg
	60-day old chicken	25 pcs	60-day old chicken	25 heads
	Farm Soil	1 Bag of 50kg. Soil	Farm soil	1 bag of 50 kg
	Bamboo poles	50 pcs	Bamboo poles or kakawater	30 pcs
	Monofilament Nylon#150	2 Kg.	Monofilament Nylon#150	2 kg
	Feed Cart	1 unit	Feed cart	1 unit
	Rags	10 pcs.	Rags	10 pcs
	First Aid Kit	1 unit	**First Aid Kit	1 unit
	Rain coat	25 pcs.	**Rain coat	25 pcs
	Apron	15 pcs.	**Apron	25 pcs
			***Note: Requirement for COC; but if registered as Full qualification, the item can be removed as it is already listed in the list for Full qualification*	
	COC 2: PRODUCE ORGANIC VEGETABLES			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Bolo	5 pc.	Bolo	5 pcs
	Digging Blade/Bar	5 pc.	Digging Blade/Bar	5 pcs
	Spading Fork	5 pc.	Spading Fork	5 pcs
	Hoe	2 set	Hoe	2 sets
	Rake	5 unit	Rake	5 units
	Shovel	5 pc.	Shovel	5 pcs
	Weighing scale, 2 kilos capacity (1); 25 kilos capacity (1)	2 unit	Weighing scale, 2 kg cap.	1 unit
			Weighing scale, 25 kg cap.	1 unit
	Measuring cup; 1 liter capacity	3 pcs.	Measuring cup; 1L cap.	3 pcs
	Pruning Shear	5 pcs.	Pruning shear	3 pcs
	Petri Dish	5 pcs.	Petri dish	3 pcs
	Spike Tooth Horrow	2 units	Spike tooth horrow	2 units
	Sprinklers, 5 liters	5 pcs.	Sprinklers, 5L	5 pcs
	Step ladder 6 ft.	1 units	Step ladder, 6 ft.	1 unit
	Holer, 4” diameter	10 units	Holer, 4” diameter	3 pcs

	Trimming knife	5 pcs.	Trimming knife	5 pcs
	Carpentry tools	1 set.	Basic Carpentry tools - hammer - chisel - saw - measuring tape	2 sets
	Knapsack sprayer	5 pcs.	Knapsack sprayer, 16 L cap.	2 units
	Plastic cup, 1 liter capacity	5 pcs	Plastic cup, 1L cap.	5 pcs
	Waste cans/bag	3 pcs.	Waste cans/bags	3 pcs
	Plow	2 set	Plow	2 sets
	Calculator	1 Pc.	Calculator	1 pc
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
	Wheel barrow	1 unit	Wheel barrow	1 unit
	Carbonizer	1 unit	Carbonizer	1 unit
	Soil Thermometer	1 pc.	Soil thermometer	1 pc
	Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
	Shredder	1 unit	**Shredder	1 unit
	Cart	1 unit	Cart	1 unit
	Portable Soil Analyser Kit	1 unit	Portable Soil Analyser Kit	1 unit
	PH meter	1 unit	PH meter	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Basal Organic Fertilizer	5 Bag of 50 kg.	Basal Organic Fertilizer	5 bags of 50 kg
	Foliar Organic Fertilizer	5 liter	Foliar Organic Fertilizer	5 liters
	Seedling Tray, plastic	6 pc	Seedling tray, plastic	6 pcs
	Plastic twine	2 roll	Plastic twine	2 rolls
	Assorted Vegetable Seedlings	10 Pack	Assorted Vegetable Seeds	10 packs
	Strainer, Nylon Screen, fine mesh	5 pcs.	Strainer, Nylon Screen, fine mesh	5 pcs
	Carbonized Rice Hull	5 Bags of 50 kg.	Carbonized Rice Hull or Carbonized Coconut Sapal or Carbonized Bamboo	5 bags of 20 kg
	Various Concoctions/Extracts	5 liters	Various Concoctions/Extracts	5 liters
	Seedling Tray, wooden	6 pcs	Seedling tray, wooden	6 pcs
	Bamboo poles	10 pcs	Bamboo poles	10 pcs
	Water Container Drum	1 pc.	Water container drum, 200L cap.	1 pc
	Stone (weights) ½ kilos	10 pcs.	Stone (weights) ½ kilos	10 pcs
	Sacks	10 pcs.	Sacks	10 pcs
	First Aid Kit	1 unit	**First Aid Kit	1 unit

	Rags	10 pcs.	Rags	10 pcs
	Apron	15 pcs.	**Apron	25 pcs
			***Note: Requirement for COC; but if registered as Full qualification, the item can be removed as it is already listed in the list for Full qualification*	
	COC 3: MANUFACTURE (PRODUCE) ORGANIC FERTILIZER			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Spade	5 pcs.	*Spade	5 pcs
	Spading Fork	5 pcs.	*Spading fork	5 pcs
	Hoe	2 sets	Hoe	2 sets
	Shovel	5 pcs.	Shovel	5 pcs
	Weighing scale, 2 kilos capacity (1); 25 kilos capacity (1)	2 units	*Weighing scale, 2 kg cap.	1 unit
			*Weighing scale, 25 kg cap.	1 unit
	Measuring cup; 1 liter capacity	3 pcs	Measuring cup; 1L cap.	3 pcs
	Sprinklers, 5 liters	5 pcs.	Sprinklers, 5L cap.	5 pcs
	Carpentry tools	1 set.	Basic Carpentry tools -hammer -chisel -saw -measuring tape	1 set
	Rake	5 units	Rake	5 pcs
	Knapsack sprayer	5 pcs.	*Knapsack sprayer, 16L cap.	2 units
			*Water container drum, 200L cap	1 pc
	Plastic cup, 1 liter capacity	5 pcs	Plastic cup, 1L cap.	5 pcs
	Waste cans/bag	3 pcs.	Waste can/bag	3 pcs
			**Note: Items must be dedicated only for COC 3: manufacture (produce) organic fertilizer due to the micro-organisms and to avoid contamination.*	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
	Shredder	1 unit	**Shredder	1 unit
	Carbonizer	1 unit	Carbonizer	1 unit
	Moisture meter	1 pc.	Moisture meter	1 pc
	Soil Thermometer	1 pc.	Soil thermometer	1 pc
	Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
	Wheel barrow	1 unit	Wheel barrow	1 unit
	Cart	1 unit	---	
	Portable Soil Analyzer Kit	1 unit	Portable Soil Analyzer Kit	1 unit
	PH meter	1 unit	PH meter	1 unit
	Vermitea aerator, 60 liters capacity, each	3 set	Vermitea aerator, 60L cap.	1 set

	Materials		Materials	
	Description	**Qty**	**Description**	**Qty**
	Basal Organic Fertilizer, sample	1 Bag of 50 kg.	Basal Organic Fertilizer, sample	1 bag of 50 kg
	Foliar Organic Fertilizer, sample	2 liter	Foliar Organic Fertilizer, sample	2 liters
	Molasses	100 liter	Molasses	100 liters
	Dry Leaves	50 kg	Dry Leaves	50 kg
	Pig Manure	50 kg	Pig Manure or Ruminants Manure	50 kg
	Carbonized Rice Hull	100 kg	Carbonized Rice Hull or Carbonized Coconut Sapal or Carbonized Bamboo	100 kg
	Plastic Sheet	20 meter	Plastic Sheet	20 meters
	Empty bags, 50 kg capacity	25 pcs.	Empty bags, 50 kg cap.	25 pcs
	Various Concoctions/Extracts	10 liters	Various Concoctions/Extracts	10 liters
	Rice straw	50 kg	Rice straw	50 kg
	Chicken Dunk	50 kg	Chicken dunk	50 kg
	Cow manure	50 kg	---	
	Rice Bran (D2)	50 kg	Rice Bran (D2)	50 kg
	Used Tires	10 pcs.	---	
	Plastic Pail, 15 liters capacity	5 pcs.	Plastic pail, 15L cap.	5 pcs
	Rags	10 pcs.	Rags	10 pcs
	First Aid Kit	1 unit	**First Aid Kit	1 unit
	Apron	15 pcs.	**Apron	15 pcs
			***Note: Requirement for COC; but if registered as Full qualification, this item can be removed as it is already listed in the list for Full qualifcation*	
	COC 4: PRODUCE ORGANIC CONCOCTIONS/ EXTRACTS			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Measuring Cup (with calibration, 1 liter capacity)	10 pcs.	Measuring cup (with calibration, 1L capacity)	10 pcs
	Plastic Cup (1 liter capacity)	10 pcs.	Plastic cup, 1L cap.	10 pcs
	Syringe, Plastic, 30 ml capacity	5 pcs.	Syringe, plastic, 30 ml capacity	5 pcs
	Bamboo Container/ Plastic container/wooden box for collecting microbes	25 pcs.	Bamboo container/ Plastic container/ wooden box for collecting microbes	25 pcs
	Slicing knife	25 pcs.	Slicing knife	25 pcs
	Pannel (imbudo)	5 pcs.	Funnel (imbudo)	5 pcs
	Carpentry tools	2 set.	---	
	Knapsack sprayer	2 pcs.	*Knapsack sprayer, 16L cap.	2 units
	Bamboo/wooden ladle	10 pcs.	Bamboo/wooden ladle	10 pcs
	Plastic Basin, 10 liters capacity	5 pcs.	Plastic basin, 10L cap.	5 pcs

	Water Container Drum	1 pc.	*Water container drum, 200L cap.	1 pc
			Chopping board	5 pcs
			Note: Items must be dedicated only for COC 4: Produce organic concoctions/extracts due to the micro-organisms and to avoid contamination.	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
	Shredder	1 unit	Mortar and Pestle	2 sets
	Wheel barrow	1 unit	Wheel barrow	1 unit
	Cart	1 unit	Cart	1 unit
	Carbonizer	1 unit	Carbonizer	1 unit
	Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
	Meat Grinder, small	1 pcs.	Meat grinder, small	1 unit
	Portable Soil Analyzer Kit	1 unit	Portable Soil Analyzer Kit	1 unit
	PH meter	1 unit	PH meter	1 unit
	Vermitea aerator, 60 liters capacity, each	3 set	Vermitea aerator, 60L cap.	1 set
	Thermometer	5 pcs.	Thermometer	5 pcs
	Moisture meter	1 pc.	Moisture meter	1 pc
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Molasses	100 liter	Molasses	100 liters
	Various Concoctions/Extracts for at least 1 liter per sample	8 liter	Various Concoctions/Extracts for at least 1 liter per sample	8 liters
	Weight (clean stone 100grams each)	150 pcs.	Weight (clean stone 100grams each)	150 pcs
	Weight (empty plastic container 250 to 500 ml capacity)	50 pcs.	Weight (empty plastic container 250 to 500 ml capacity)	50 pcs
	Plastic strainer, fine mesh, 1ft x 1ft square	25 pcs.	Plastic strainer, fine mesh, 1ft x 1ft square	25 pcs
	Plastic strainer, small mesh, 1ft x 1 ft square	25 pcs.	Plastic strainer, small mesh, 1ft x 1 ft square	25 pcs
	Empty Plastic Container, 1 liter capacity	50 pcs.	Empty plastic bottle container, 1L capacity	25 pcs
	Empty Plastic Container, 5 liter capacity	50 pcs.	Empty plastic gallon container, 5L capacity	25 pcs
	Plastic Tie box	2 roll	Plastic tie box	2 rolls
	Plastic Container, 15 liters capacity	25 pcs.	Plastic container, 15L cap.	25 pcs
	Plastic Container, 60 liters capacity	10 pcs.	Plastic container, 60L cap.	5 pcs
	Plastic Hose, 5mm dia.	5 meter	Plastic hose, 5mm dia.	5 meters
	Waste cans/bag	3 pcs.	Waste cans/bag	3 pcs

	Plastic Sheet	10 meter	Plastic sheet	10 meters
	Manila Paper	25 pcs.	Manila paper	25 pcs
	Rubber Bond, Large	5 box	Rubber band, large	5 boxes
	Marking Pen	5 pcs.	Marking pen, assorted	5 pcs
	Masking Tape, medium	5 pcs.	Masking tape, medium	5 pcs
	Rags	10 pcs.	Rags	10 pcs
	First Aid Kit	1 unit	**First Aid Kit	1 unit
	Apron	15 pcs.	**Apron	15 pcs
			***Note: Requirement for COC; but if registered as Full qualification, this item can be removed as it is already listed in the list for Full qualification*	
	COC 5: RAISE ORGANIC HOGS			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Bolo	5 pcs.	Bolo	5 pcs
	Broomstick	5 pcs.	Broomstick	5 pcs
	Plastic Pail (10 liter. capacity)	5 pcs.	Plastic pail, 10L cap.	5 pcs
	Carpentry tools	1 set	Basic Carpentry tools - hammer - chisel - saw - measuring tape	5 sets
	Knapsack sprayer	2 unit	Knapsack sprayer, 16L cap.	1 unit
	Storage Container with cap,15 liter capacity	5 pc.	Storage container with cap, 15L capacity	5 pcs
	Weighing scale, 10 kilos capacity (1); 150 kilos capacity (1)	2 unit	Weighing scale, 10 kg cap.	1 unit
			Weighing scale, 150 kg cap.	1 unit
	Shovel	5 pcs.	Shovel	5 pcs
	Sprinklers, 5 liters	2 pcs.	Sprinklers, 5L	2 pcs
	Step ladder 6 ft.	1 unit	Step ladder, 6 ft.	1 unit
	Storage tools/cabinet	1 unit	Tools storage / cabinet	1 unit
	Digging Bar/Blade	5 pc	Digging bar/Blade	5 pcs
	Plastic cup, 1 liter capacity	5 pc	Plastic cup, 1L cap.	5 pcs
			Water container drum, 200L cap.	1 pc
	Waste cans/bag	5 pc.	Waste cans/bag	3 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
	Shredder	1 unit	**Shredder	1 unit
	Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
	Cart	1 unit	Cart	1 unit
	Wheel barrow	1 unit	Wheel barrow	1 unit

	Materials		Materials	
	Description	**Qty**	**Description**	**Qty**
	Hog Feeds: starter	15 kg	Hog Feeds: starter	15 kg
	Hog Feeds: grower	15 kg	Organic Hog Feeds: grower	15 kg
	45-day old piglet	5 head	45-day old piglet	5 heads
	Rice Hull	8 Bag of 50kgs	Rice Hull or Corn Straw or Sawdust	8 sacks of 20 kg
	Sand	1 Bag of 50kgs	Sand	1 bag of 50 kg
	Molasses	10 liter	Molasses	10 liters
	Various Concoctions/Extracts	5 liter	Various Concoctions/Extracts	5 liters
	Hog Feeds: finisher	15 kg	Organic Hog Feeds: finisher	15 kg
	80-day old pig	5 head	80-day old pig	5 heads
	Farm Soil	1 Bag of 50 kgs Soil	Farm soil	1 bag of 50 kg
	Bamboo poles	50 pc	Bamboo poles	20 pcs
	Monofilament Nylon#150	2 kg	Monofilament Nylon#150	2 kg
	First Aid Kit	1 unit	**First Aid Kit	1 unit
	Apron	15 pcs.	**Apron	15 pcs
			***Note: Requirement for COC; but if registered as Full qualification, this item can be removed as it is already listed in the list for Full qualification*	
	COC 6: RAISE ORGANIC RUMINANTS			
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Bolo	5 pcs.	Bolo	5 pcs
	Broomstick	5 pcs.	Broomstick	5 pcs
	Plastic Pail (10 liter. capacity)	5 pcs.	Plastic pail, 10L cap.	5 pcs
	Carpentry tools	1 set	Basic Carpentry tools - hammer - chisel - saw - measuring tape	2 sets
	Knapsack sprayer	2 unit	Knapsack sprayer, 16L cap.	1 unit
	Storage Container with liter capacity	5 pc.	Storage container with 20L capacity	5 pcs
	Weighing scale, 10 kilos capacity (1); 100 kilos capacity (1)	2 unit	Weighing scale, 10 kg cap.	1 unit
			Weighing scale, 150 kg cap.	1 unit
	Sprinklers, 5 liters	2 pcs.	Sprinklers, 5L	2 pcs
	Step ladder 6 ft.	1 unit	Step ladder, 6 ft.	1 unit
	Storage tools/cabinet	1 unit	Tools storage /cabinet	1 unit
	Shovel	5 pc	Shovel	2 pcs
	Digging Bar/Blade	5 pc	Knapsack sprayer, 16L cap.	1 unit

Plastic cup, 1 liter capacity	5 pc	Plastic cup, 1L cap.	5 pcs
Waste cans/bag	3 pc.	Waste cans/bag	3 pcs
		Sickle	5 pcs
		Water container drum, 200L cap.	1 pc
Equipment		**Equipment**	
Description	**Qty**	**Description**	**Qty**
Booth/temporary shed	1 unit	Booth/temporary shed	1 unit
Shredder	1 unit	Shredder (chopper)	1 unit
Fire Extinguisher	1 unit	**Fire extinguisher	1 unit
Cart	1 unit	Cart	1 unit
Wheel barrow	1 unit	Wheel barrow	1 unit
Materials		**Materials**	
Description	**Qty**	**Description**	**Qty**
Goat Feeds: starter, grower, finisher	15 kg	Goat Feeds: starter	15 kg
Goat Feeds: grower	15 kg	Goat Feeds: grower	15 kg
45-day old Goat	4 head	45-day old Goat	4 heads
Rice Hull	8 Bags of 50kgs	Rice Hull or Corn Straw or Sawdust	8 sacks of 20 kg
Sand	1 Bag of 50kgs Soil	Sand	1 bag of 50 kg
Plastic sheet	1 roll	Plastic sheet	1 roll
Various Concoctions/Extracts	5 liter	Various Concoctions/Extracts	5 liters
Goat Feeds: finisher	15 kg	Goat Feeds: finisher	15 kg
80-day old Goat	4 head	80-day old Goat	4 heads
Farm Soil	1 Bag of 50 kgs Soil	Farm soil	1 bag of 50 kg
Bamboo poles	50 pc	Bamboo poles	20 pcs
Monofilament Nylon#150	2 kg	Monofilament Nylon#150	2 kg
Rags	10 pcs.	Rags	10 pcs
		**First Aid Kit	1 unit
Apron	15 pcs.	**Apron	25 pcs
		***Note: Requirement for COC; but if registered as Full qualification, this item can be removed as it is already listed in the list for Full qualification*	

II. B - TRAINING FACILITIES (TF)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification :	**ORGANIC AGRICULTURE PRODUCTION NC II**

Existing

3.5 TRAINING FACILITIES
Based on a class size of 25 students/trainees.

SPACE REQUIREMENT	SIZE IN METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)		
● Lecture Area		40
● Learning resource center		10
● Laboratory/ Practice Area		40
● Washroom (Female)		4
● Washroom (Male)		4
● Stock Room		4
B. Experimental Farm*		**10,000.00 (1ha)**

*The experimental farm should have the following areas for organic farm activities:

- Poultry House for 300 chicks with 100sq meters floor area
- Hog House for 20 pigs with 40 sq meters floor area
- Small Ruminants House for 5 animals with 20 sq meter floor area
- Garden Plots with a total land area 40 sq meters divided into 4 plots
- Concoction and Extraction Laboratory
- Organic Fertilizer Preparation House

Amended

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)			**132**
Lecture Room			40
Learning Resource Center			20
Activity Room			
-Workshop area with sink			40
-Store room			20
-Rest room with shower (male, female & PWD)	3x4	12	12
B. Experimental Area			**10,000 (1ha)**
TOTAL			**10,132**

NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

AGRICULTURAL, FORESTRY AND FISHERY SECTOR	
Qualification:	**ORGANIC AGRICULTURE PRODUCTION NC II**

Existing	Amended
● Must be a holder of National TVET Trainer Certificate I (TM I and NC) ● 1 year relevant industry experience ● 80 Hours teaching experience	• Must be a holder of National TVET Trainer Certificate I (NTTC I) in Organic Agriculture Production NC II; and • Must have at least 2 years' industry experience within the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
AUTOMOTIVE ENGINE REBUILDING NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Box wrench	2 sets	Mechanic tool set with tool box/caddy: • box wrench • open end wrench • socket wrench • adjustable wrench • screw driver (T-handle) • screw driver (flat & philips head) • pliers (side cutting) • pliers (long nose) • mechanical pliers • hammer (ball peen) • hammer (plastic faced) • feeler gauge)	5 sets
	Open end wrench	2 sets		
	Socket wrench	2 sets		
	Adjustable wrench	2 pcs.		
	Screw driver (T-handle)	2 sets		
	Screw driver (flat & Phillips head)	2 sets		
	Pliers (side cutting)	4 pcs.		
	Pliers (long nose)	4 pcs.		
	Mechanical pliers	4 pcs.		
	Hammer (ball peen)	4 pcs.		
	Hammer (plastic faced)	4 pcs.		
	Feeler gauge	4 pcs.		
	Snap ring pliers (internal)	2 pcs.	Snap ring pliers (internal)	2 pcs
	Snap ring pliers (external)	2 pcs.	Snap ring pliers (external)	2 pcs
	Puncher (hollow)	1 set	Puncher (hollow)	1 set
	Piston ring expander	2 pcs.	Piston ring expander	2 pcs
	Piston ring compressor	2 pcs.	Piston ring compressor	2 pcs
	Torque wrench (dial type)	2 pcs.	Torque wrench (dial type)	2 pcs
	Valve spring remover	2 pcs.	Valve spring remover	2 pcs
	Dial gauge	2 pcs.	Dial gauge	2 pcs
	Bore gauge	2 pcs.	Bore gauge	2 pcs
	Depth gauge	2 pcs.	Depth gauge	2 pcs
	Straight edge	2 pcs.	Straight edge	2 pcs
	Micrometer (inside)	2 pcs.	Micrometer (inside)	2 pcs
	Micrometer (outside)	2 pcs.	Micrometer (outside)	2 pcs
	Special service tool (SST) – refer to service manual		Special service tool (SST) – refer to service manual	
	Taps and die	1 set	Taps and die	1 set
	Drills and bits	1 set	Drills and bits	1 set
	Hacksaw w/ blade	2 pcs.	Hacksaw w/ blade	2 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Parts cleaning tank	1 pc.	Parts cleaning tank	1 pc

	High-pressure cleaner-heated	1 pc.	High-pressure cleaner-heated	1 pc
	Work bench - 2000mm	1 pc.	Work bench with vice - 2000mm	1 pc
	Work bench - steel top	1 pc.	---	
	Engine stand	1 pc.	Engine stand	1 pc
	Crankshaft grinder	1 pc.	Crankshaft grinder	1 pc
	Center lathe – 140mm	1 pc.	Center lathe – 140mm	1 pc
	Cylinder head + block grinder	1 pc.	Cylinder head + block grinder	1 pc
	Pedestal grinder – 200mm	1 pc.	Pedestal grinder – 200mm	1 pc
	Hydraulic press – 1000KN	1 pc.	Hydraulic press – 1000KN	1 unit
	Cylinder boring m/c – 130mm	1 pc.	Cylinder boring m/c – 130mm	1 pc
	Cylinder boring m/c – 60mm	1 pc.	Cylinder boring m/c – 60mm	1 pc
	Static balancing device	1 pc.	Static balancing device	1 pc
	Line boring bar	1 pc.	Line boring bar	1 pc
	Precision honing machine	1 pc.	Precision honing machine	1 unit
	Air compressor – 1100 L/min	1 pc.	Air compressor – 1100 L/min, 2Hp	1 unit
	Welding unit – AC/DC	1 pc.	Welding unit – AC/DC	1 unit
	Gas welding & cutting set	1 pc.	Gas welding & cutting set	1 set
	Con-rod reconditioning machine	1 pc.	Con-rod reconditioning machine	1 unit
	Arbor press – 20 KN	1 pc.	Arbor press – 20 KN	1 pc
	Honing bar	1 pc.	Honing bar	1 pc
	Bench storage cabinet	1 pc.	Bench storage cabinet	1 pc
	Pillar drilling machine	1 pc.	Pillar drilling machine	1 unit
	Oil dispenser - portable	1 pc.	Oil dispenser – portable	1 pc
	Lubricating pump	1 pc.	---	
	Valve & clutch spring tester	1 pc.	Valve spring tester	1 pc
	Clutch assembly fixture – 80mm	1 pc.	Clutch assembly fixture – 80mm	1 pc
	Connecting rod aligning jig	1 pc.	Connecting rod aligning jig	1 pc
	Pedestal grinder – 200mm	1 pc.	Pedestal grinder – 200mm	1 pc
	Engine valve grinder	1 pc.	Engine valve grinder	1 pc
	Valve seat turning kit	1 pc.	Valve seat turning kit	1 pc
	Storage for reconditioned motors	1 pc.	Storage for reconditioned motors	1 pc
	Open shelf units	1 pc.	Open shelf unit	1 pc
	Storage cabinet	1 pc.	---	
	Portable crane	1 pc.	---	
	Power hacksaw	1 pc.	Power hacksaw	1 pc
			Oiler, ½ L cap.	5 pcs
			Baby crane	1 pc
			Cleaning equipment - Pressurized water	1 unit

	Materials		Materials	
	Description	**Qty**	**Description**	**Qty**
	SDS (Service Data Specification)	2 copies	---	
	Service Manual	2 copies	Service Manual	2 copies
			Overhauling manual	2 copies
	Engineering Drawing	2 copies	Engineering Drawing	2 copies
	Overhauling gasket - Gas engine - Diesel engine	2 sets	Overhauling gasket - Gas engine - Diesel engine	2 sets
	Piston rings (1 set)	2 sets	Piston rings	2 sets
	Bearing / Bushing - Connecting rod camshaft / bushing - Main bearing / cracker arm/ bushing	2 sets	Bearing / Bushing - Connecting rod camshaft / bushing - Main bearing / cracker arm/ bushing	2 sets
	Timing belts	2 pcs.	Timing belts	2 pcs
			Timing chain	2 pcs
	Valve assembly - Exhaust valve(1 set) - Intake valve(1 set)	2 sets	Valve assembly - Exhaust valve (1 set) - Intake valve (1 set)	2 sets
	Cleaning equipment - Degreaser - Pressurized water	2 sets	---	
	Magnaflux powder - Chemical spray - Kerosene	2 sets	Kerosene	1 Gal.
	De-waxing, Detergent	2 btls.	---	
	Special purpose agent	2 btls.	Special purpose agent	2 btls
	Plastigage	2 pcs.	Plastigage	5 pcs
	Engine oil	10 liters	Engine oil	10 liters
	Gasoline oil	10 liters	Gasoline oil	10 liters
	Diesel oil	10 liters	Diesel oil	10 liters
	Gloves	10 pcs.	Gloves, solvent resistant	25 pairs
			Gloves, cotton	25 pairs
	Goggles	10 pcs.	Goggles	25 pcs
	Clean rags	10 pcs.	Cleaning rags	1 Kilo
	Clean brush	10 pcs.	Clean brush, 2”	10 pcs
	Oil filter	2 pcs.	Oil filter	2 pcs
	Fuel filter	2 pcs.	Fuel filter	2 pcs
	Air filter	2 pcs.	Air filter	2 pcs
	Training Materials		**Training Materials**	
	Reference books		-Reference books	
	Manuals		-Manuals	

	Catalogs		-Catalogs	
	Brochures		-Brochures	
	Modules/LEs		-Modules/LEs	
	CDs/Video tapes		-Audio-Visual materials	

II. B - TRAINING FACILITIES (TF)

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR						
Qualification :	**AUTOMOTIVE ENGINE REBUILDING NC II**					
Existing			**Amended**			
3.5 TRAINING FACILITIES Based on a class size of 25 students/trainees.			**3.5 TRAINING FACILITIES** Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.			
SPACE REQUIREMENT	**SIZE IN METERS**	**AREA IN SQ. METERS**	**SPACE REQUIREMENT**	**SIZE IN METERS**	**AREA IN SQ. METERS**	**TOTAL AREA IN SQ. METERS**
Building (permanent)	26.00 x 28.00	728	**A. Building (permanent)**			**760.25**
Trainee Working Space	3.50 x 3.50 per student/ trainee	12.25 per student	Lecture Room	9.00 x 10.00	90	90
Lecture Room	9.00 x 10.00	90	Learning Resource Center	5.00 x 8.00	40	40
Learning Resource Center	5.00 x 8.00	40	Activity Room			
Facilities/ Equipment/ Circulation Area	-	-	-Trainee Working Space	3.50 x 3.50 per student/ trainee	12.25 per student	306.25
			-Store room	4 x 4	16	16
			-Rest room with wash room (male, female & PWD)	4 x 4	16	16
			Facilities/ Equipment/ Circulation Area (30% of teaching accommodation)			292
			TOTAL			**760.25**
			NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.			

II. C – TRAINER'S QUALIFICATION (TQ)

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR	
Qualification:	**AUTOMOTIVE ENGINE REBUILDING NC II**
Existing	**Amended**
• Must be a holder of Auto Engine Rebuilding NC III • Must have undergone training on Training Methodology II (TM II) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission) *Optional. Only when required by the hiring institution. Reference: TESDA Board Resolution No. 2004 03	• Must be a holder of National TVET Trainer Certificate I (NTTC I) on AUTO ENGINE REBUILDING NC II; and • Must have at least 2 years' industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
AUTOMOTIVE SERVICING NC IV	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Screw driver, one of each kind	6 pcs	Mechanical tool set with tool box/caddy: • Screw driver one of each kind • Box wrench, 4mm-32mm • Open end wrench, 4mm-32mm • Set of Socket wrench, 10-24mm • Mechanical Pliers • Long Nose Pliers • Combination wrench, 6mm-19mm • Magnetic pick up	4 sets
	Box wrench of 28 pcs, 4mm-32mm	2 sets		
	Open end wrench of 28 pcs, 4mm-32mm	2 sets		
	Socket wrench	2 sets		
	Pliers	2 pcs		
	Combination wrench, 12 pcs, 6mm-19mm	2 sets		
	Magnetic pick up	4 pcs		
	Fuel pressure gauge	2 units	Fuel pressure gauge	2 units
	LED tester	4 pcs	---	
	Test light	10 pcs	Multi-tester, digital	4 pcs
	Wire stripper	4 pcs	Wire stripper	4 pcs
	Torque wrench, click type	2 units	Torque wrench, preset type, 0-100 lbs	2 units
			Torque wrench (leaf spring type) aka deflecting beam type, 0-200 lbs	2 units
	Dial indicator with stand	2 pcs	Dial indicator with stand	2 pcs
	Micrometer (25mm-100mm)	2 pcs	Micrometer (0-25mm)	1 pc
			Micrometer (25-50mm)	1 pc
	A/T pressure gage	1 init	A/T pressure gauge	1 unit
	Allen wrench	2 sets	Allen wrench	4 sets
	Snap ring pliers, internal	2 pcs	Snap ring pliers, internal (SST)	2 pcs
	Snap ring pliers, external	2 pcs	Snap ring pliers, external (SST)	2 pcs
	Trouble light	4 pcs	Trouble light, LED type	4 pcs
	Leaf feeler gauge	2 sets	Feeler gauge	2 sets
	Vernier caliper	2 pcs	Vernier caliper, 0-150 mm	2 pcs
	Outside micrometer	2 sets	---	
	Cylinder bore gauge	2 sets	---	
	Straight edge	2 pcs	---	
	Engine Overhauling & automatic transmission (SST) per model	2 sets	Automatic transmission (SST) per model	2 sets
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Power window assembly	4 units	Training vehicle, diesel equipped with ABS (electric power window, common rail, thief deterrent	1 unit

			system, electronic stability control, electronic traction control, power mirror, automatic transmission, electronic controlled engine)	
			Training vehicle, gas equipped with ABS (electric power window, common rail, thief deterrent system, electronic stability control, electronic traction control, power mirror, automatic transmission, electronic controlled engine)	1 unit
	Injector cleaner	1 unit	Injector cleaner, for diesel and gasoline	1 unit
	Vehicle lifting equipment	1 unit	Vehicle lifting equipment, 2 post lifter	1 unit
	Creeper	4 units	Creeper	4 units
			Car stand, adjustable type, 2-3 tons	10 pcs
			Crocodile jack, 2 tons	2 units
	Electronics controlled Automatic transmission	1 unit	Electronics controlled Automatic transmission	2 units
	Electronic control injection pump	4 units	Electronic control supply pump	4 units
	Air compressor with accessories	1 unit	Air compressor with accessories, 1.5hp with filter dryer	1 unit
	Rotary injection pump	4 units	Rotary injection pump	4 units
	Exhaust gas analyzer	1 unit	Exhaust gas analyzer and CO meter	1 set
			Exhaust hose	2 pcs
			Air hose Reel	2 pcs
	Opacimeter	1 unit	Opacimeter	1 unit
	Electronic Automotive Diagnostic Scanner with software	2 unit	Electronic Automotive Diagnostic Scanner with software	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Car alarm	4 units	Car alarm	2 units
	Hand cleaning detergents	1 kg.	Hand cleaning detergents, powder	1 kg
			Hand cleaning detergents, liquid	2 L
	Rugs	10 kg	Rags	5 kg
	A/T fluid	20 L	A/T fluid	40 L
	Engine oil	20 L	Engine oil	40 L
	Gloves	25 pairs	Gloves, solvent resistant	5 pairs
			Gloves, cotton	25 pairs
	mask	25 pcs	Dust mask, N95	25 pcs
	Apron	25 pcs.	Apron	25 pcs
	Goggles	25 pcs.	Goggles	25 pcs

II. B - TRAINING FACILITIES (TF)

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR							
Qualification :				**AUTOMOTIVE SERVICING NC IV**			
Existing				**Amended**			
3.5 TRAINING FACILITIES Based on a class size of 25 students/trainees.				**3.5 TRAINING FACILITIES** Based on a class intake of 20 students/ trainees, the space requirements and their corresponding sizes are as follows.			
SPACE REQUIREMENT	**SIZE IN METERS**	**AREA IN SQ. METERS**	**TOTAL AREA IN SQ. METERS**	**SPACE REQUIREMENT**	**SIZE IN METERS**	**AREA IN SQ. METERS**	**TOTAL AREA IN SQ. METERS**
Workshop/ Laboratory area		6 sq.m/ trainee	150	**A. Building (permanent)**			**290**
Lecture Room		28	28	Lecture Room			28
Learning Resource Center		20	20	Workshop/ Laboratory with bay area good for 2 vehicles			150
Wash/Comfort room (male/female)		10	10	Learning Resource Center			20
Storage/Tool room		20	20	Activity Room			
Circulation Area			60	-Store room	4x4	16	16
Total Area			**288**	-Rest room with wash room (male, female & PWD)	4x4	16	16
				Facilities/ Equipment/ Circulation Area (30% of teaching accommodation)			60
				B. Experimental Area			**0**
				TOTAL			**290**
				NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.			

II. C – TRAINER'S QUALIFICATION (TQ)

AUTOMOTIVE AND LAND TRANSPORTATION SECTOR	
Qualification:	**AUTOMOTIVE SERVICING NC IV**
Existing	**Amended**
• Holder of National TVET Trainers Certificate (NTTC) Level 1 - Automotive Servicing NC IV • Must be computer literate • Must have at least 2 years job/industry experience	For New Trainer: • Must be a holder of National TVET Trainer Certificate I (NTTC I) on AUTOMOTIVE SERVICING NC IV; • Must have at least 2 years' industry experience within the last 5 years; and • Must have training certificate on Facilicate e-Learning Session For Existing Trainer: • Must be a holder of National TVET Trainer Certificate I (NTTC I) on AUTOMOTIVE SERVICING NC IV; • Industry immersion of 40 hours annually (industry training which includes structured training program inclusive of hands-on activities, observation in a workshop, and training certificates with number of hours); and • Must have training certificate on Facilitate e-Learning Session

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS (Amendments to Annex A in IG 055-2021)

ELECTRICAL AND ELECTRONICS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
COMPUTER SYSTEMS SERVICING NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Screwdriver (standard)	10 pcs	Screwdriver (standard)	10 pcs
	Screwdriver (Philips)	10 pcs	Screwdriver (Philips)	10 pcs
	Precision screwdrivers	5 sets	Precision screwdrivers	10 sets
	Long nose pliers	10 pcs	Long nose pliers	10 pcs
	Mechanical pliers	10 pcs	Combinational pliers	10 pcs
	Allen wrench	10 sets	Allen wrench	10 sets
	Crimping tools	10 pcs	Pass Through Crimping tool	10 pcs
	Soldering iron	10 pcs	Soldering iron	10 pcs
	Solder sucker	10 pcs	Solder sucker	10 pcs
	Wire stripper	5 pieces	Wire stripper	5 pcs
	Portable electric hand drill	1 unit	Portable electric screwdriver	1 unit
	Drill bit	1 set	Screw bit	1 set
	Anti-static devices	10 pcs	Anti-static Wrist Strap, Elastic Nylon Fiber	10 pcs
	Flash light/Head mounted light	5 pcs	Flash light/Head mounted light	10 pcs
			Can of Compressed Air or Small Portable Vacuum	10 cans or 1 unit
			Krone punchdown tool	10 pcs
			Hot Air Soldering	1 unit
			Cleaning Brush	1 unit
			Steel Tape, 5 meters	5 pcs
			VOM (Analog/Digital)	10 pcs
			Anti-static Mat (30 x 50mm)	10 pcs.
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Desktop Computer	26 units	Desktop Computer (A6/A10 AMD, i3 4th Gen, 4GB DDR3/DDR4, 500GB HDD) for Client Purposes not for Assembling.	10 units
	Laptop computer/Netbook	10	Laptop computers/Netbook (Celeron 4th Gen and above, 4GB, 500 GB HDD)	10 units
	Computers for server	10	Computers for server (i5, 9th Gen, 4 GB, 500 GB HDD)	10 units
	Server cabinet/Frame	10	Either commercial or fabricated Frame/ Rack/ Cabinet	10 units

	Patch panel (48-ports)	20 pcs	Patch panel (24 or 48 ports) CAT 6	20 pcs
	Working tables	10 sets	Working table with chair (for two computers	10 sets
	Internet subscription (at least 2 MBPS)	1 unit	Internet subscription (at least 50 MBPS)	1 unit
	Uninterruptible Power Supply (UPS)	10 units	Uninterruptible Power Supply (UPS) (650 VA)	10 units
	Hub / Switch	10 unit	Hub / Switch (24 ports 100mbps)	10 unit
	Managed switch	2 units	Managed switch	1 unit
			KVM Switch (optional)	1 unit
	Network controller	1	Network controller	1
	ADSL Router with Wi-Fi	11	Router with Wi-Fi (2.4-5Ghz) Dual Band	10 units
	Wireless Access Point	10	Wireless Access Point (2.4-5Ghz) Dual Band	10
	PC Video camera	1 unit	PC Video camera/ Web camera	10 units
	External optical drive	2 units	External optical drive	2 units
	USB External HD	1 unit	USB External HDD, 3.5 enclosure	1 unit
			USB External HDD, 2.5 enclosure	1 unit
			USB External HDD, All-in-one External enclosure	1 unit
	Network External HD	1 unit	Network Attached Storage (NAS) HD - 1 unit	1 unit
	scanner	1 unit	3-in-1 Printer with Wireless Access	1 unit
	USB printer	1 unit	---	
	Network printer	1 unit	---	
	Flash disk / Memory stick	11 pcs	Flash drive (3.0 8GB)	10 units
	Electronic tester VOM	10 units	Multitester VOM	10 units
	LAN Cable tester	5 units	LAN Cable tester	10 units
			Used LAN/NIC for PCI slot	5 units
			Good LAN/NIC for PCI slot for replacement	5 units
			Used Motherboard	5 units
			Good Motherboard for replacement	5 units
			Used Power Supply	5 units
			Good Power Supply for replacement	5 units
			Used AC cable	5 pcs
			Good AC cable for replacement	5 pcs
			Used CAT6 cable 2 meters	10 meters
			Good CAT6 cable 2 meters for replacement	10 meters
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**

	RJ 45	400 pcs.	RJ 45 Pass Though	400 pcs
	Modular box (RJ45)	25 pcs.	Modular box (RJ45)	25 pcs
	Raceway or Slotted PVC 1.5” x 1.5” x 48”	20 pcs.	Raceway or Slotted PVC 1.5” x 1.5” x 48”	20 pcs
	UTP cable	1 box	UTP cable (CAT 6)	1 box
	Contact cleaner	1 can	Contact cleaner	1 can
	Whiteboard	1 piece	Whiteboard	1 pc
	Fastener	1 lot	---	
	Filler (lead-free)	1 spool	Filler (lead-free)	1 spool
	Fiber optic cable 2 meters (terminated)	8 pcs	Fiber optic cable 2 meters (terminated)	4 pcs
			Battery (9V for VOM)	10 pcs
			Battery (1.5V for VOM)	20 pcs
			Battery (9V for LAN Tester)	10 pcs
			Alcohol (Isopropyl 70%)	1 Liter
	INSTALLERS / SOFTWARE		**INSTALLERS / SOFTWARE**	
	Desktop OS (license for proprietary software)	26	Desktop OS (Windows 10 and up - volume license for proprietary software)	10 units
	Network OS (license for proprietary software)	10	Network OS (Windows Server 2019 and up - license for proprietary software)	1 unit
	Office productivity software (license for proprietary software)	26	Office productivity software (license for proprietary software) - FREE Version acceptable OpenOffice/LibreOffice/WPS	10 units
	Anti-virus (license for proprietary software)	26	Anti-virus (license for proprietary software) - or FREE version acceptable	10 units
	Disk utility software	5	Disk utility software - FREE Version acceptable	10 units
	Virtualization software (license for proprietary software)	5	Virtualization software (license for proprietary software) -FREE Version acceptable	10 units
	Disk creator software	5	Disk creator software (Bootable USB Image Creator) - FREE version	10 units
	Disk image software	5	Disk image software (Image for Recovery system) FREE version acceptable	10 units
			Application Software (Pdf reader, Media player, File Archiving and Compression Tool, USB Disc Security)	1 lot
	RESOURCES / MANUALS		**RESOURCES / MANUALS**	
	Motherboard’s manual and installer	26 pieces	Motherboard’s manual and installer	26 pieces
	Device driver installer	10 pieces	Device driver installer	10 pieces

	Assorted Computer book, PC Magazines and journals	1 lot	Assorted Computer books/e-books, online magazines/journals	1 lot

II. B - TRAINING FACILITIES (TF)

ELECTRICAL AND ELECTRONICS SECTOR	
Qualification :	**COMPUTER SYSTEMS SERVICING NC II**

Existing

3.5. TRAINING FACILITIES

The Computer Systems Service Workshop must be in an infrastructure facility that is generally accepted to industry standards and practice. Based on class size of minimum of 25 student/trainees the space requirements for the teaching/ learning and circulation areas are as follows:

TEACHING / LEARNING AREAS	SIZE (in METER)	AREA (in Sq. Meters)	TOTAL AREA (in Sq. Meters)
• laboratory and/or lecture area	6 x 8	48	48
• storage area	2 x 2	4	4
• learning resource center	4 x 5	20	20
• equipment circulation area		20	20
		Total Workshop Area:	92

Amended

3.5. TRAINING FACILITIES

The Computer Systems Service Workshop must be in an infrastructure facility that is generally accepted to industry standards and practice. Based on class size of minimum of 25 student/trainees the space requirements for the teaching/ learning and circulation areas are as follows:

TEACHING / LEARNING AREAS	SIZE (in METER)	AREA (in Sq. Meters)	TOTAL AREA (in Sq. Meters)
• laboratory and/or lecture area	6 x 8	48	48
• storage area	2 x 2	4	4
• learning resource center	4 x 5	20	20
• equipment circulation area		20	20
		Total Workshop Area:	92

(Disinfecting area/Portable hand wash area if possible)

II. C – TRAINER'S QUALIFICATION (TQ)

ELECTRICAL AND ELECTRONICS SECTOR	
Qualification:	**COMPUTER SYSTEMS SERVICING NC II**

Existing

● Holder of National TVET Trainer's Certificate (NTTC) Level 1
● *Must have at least 2 years relevant job/industry experience.

* Optional: Only when required by the hiring institution

Amended

● Holder of National TVET Trainer's Certificate (NTTC) Level 1 in Computer Systems Servicing NC II; and
● Must have at least 2 years relevant job/industry experience.

FOR RENEWAL: Any of the following
● Work Immersion (COE or work immersion certification for at least 40 hrs)
● At least 8 hours relevant/ related ICT seminars/refresher trainings

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

ELECTRICAL AND ELECTRONICS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ELECTRICAL INSTALLATION AND MAINTENANCE NC IV	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Crimping tools	5 pcs.	Crimping tools	5 pcs
	Pliers	5 pcs.	Pliers	5 pcs
	Screw drivers	5 sets	Screw drivers	5 sets
	Wrenches (box & open)	5 sets	Wrenches (box & open)	5 sets
	Wire splicers/strippers	5 pcs.	Wire splicers/strippers	5 pcs
	Measuring tools (e.g. Pull-push meter)	5 pcs.	Measuring tools (e.g. Pull-push meter)	5 pcs
			Multi-tester (VOM)	5 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Power supply - Automatic Voltage Regulator (AVR) - Un-interruptible power supply (UPS)	5 units	Regulated power supply 24 volts DC	5 units
			Automatic Voltage Regulator (AVR) 220 VAC (at least 1 KVA)	2 units
			Un-interruptible Power Supply (UPS) (at least 1 KVA)	2 units
	Generators and motors	5 units	Motors, 3-phase, 220 V, 1.0 HP min., 6-leads out	5 units
	Transformer	5 units	---	
	Capacitors	5 units	Electrolytic Capacitors cylindrical	5 units
	Inverters/Rectifiers	5 units	Inverters / rectifiers (at least 1KVA)	5 units
	Controllers	5 units	---	
	- Motor controls - Electro-mechanical controllers (e.g. Solenoid)	10 sets	Motor controls	10 sets
			Hydraulic Trainer with 3 actuators	1 unit
	- Electro-Pneumatic controller	1 set	Pneumatic Trainers with 3 actuators	1 unit
	Pressure gauge	5 pcs.	Pressure gauge (Hydraulic)	3 units
			Pressure gauge (Pnuematic)	3 units
	Pressure Analyzer/ Gauge manifold	5 pcs.	---	
	Leak tester	5 pcs.	---	
	Micro PLC	10 units	PLC with interface cable, 20 I/Os	5 sets
	PLC Simulator Software	25 lic.	PLC Software	5 sets
			Laptop/Desktop	5 units

			Thermal Scanner	1 pc
			PPEs	
			Safety gloves	5 pcs
			Safety shoes	5 pairs
			Hard hat	5 pcs
			Safety goggles	5 pcs
			Proper working clothes	5 pcs
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Circuit breakers/Fuses (Din rail type)	5 pcs.	Circuit breakers/Fuses (Din rail type), 3P	5 pcs
	PLC materials	5 pcs.	Buzzer, 24VDC or 220VAC	5 pcs
	Relays (Din rail type)	5 pcs.	Relays (Din rail type), 24V, 2NC, 2NO	5 pcs
	Timers (Din rail type)	5 pcs.	Magnetic Contactors for 1.5 HP motor w/ 2NO, 2NC	10 units
	Terminal Blocks/Lugs (Din rail type)	5 pcs.	Terminal Blocks/Lugs (Din rail type)	5 pcs
	Pilot lamps	5 pcs.	Pilot lamps, 24VDC or 220VAC	10 pcs
	Actuators	5 pcs.	Control wire, #18 AWG	30 meters
	Push buttons (panel type)	20 pcs.	Push buttons (panel type)	10 pcs
	Selector Switches (panel type)	20 pcs.	Selector switches (panel type)	10 pcs
	Cable duct	5 lengths	Cable duct, 1 – 1.5 inches	2 lengths
	Din rail	4 lengths	Din rail	2 lengths
	Wire Strap	3 packs	Labelling machines	1 unit
	Wire Markers	20 pcs.	Wire markers	2 sets
	Cable Tie	5 pack	Cable tie, 5 inches	2 packs
	Cable (Royal cord)	20 mtrs	TF wire, #12	30 meters
	Glands/Grommet	10 pcs.	---	
	Conductors	2 boxes	Royal cord (multicore) 3C/12AWG	10 meters
	Insulators	5 rolls	---	
			Circuit breakers/Fuses (Din rail type), 2P	5 pcs
	Forms/Manuals		**Forms/Manuals**	
	PLC plan and specification		PLC plan and specification	As needed
	Requisition form(s)		Requisition form(s)	
	Industry/Institution Quality Manual		Industry/Institution Quality Manual	
	User's guide		User's guide	
	Drawings/diagrams		Drawings/diagrams	

			Philippine Electrical Codes Part 1 at least 2017 ed.	1 unit

II. B - TRAINING FACILITIES (TF)

ELECTRICAL AND ELECTRONICS SECTOR	
Qualification :	**ELECTRICAL INSTALLATION AND MAINTENANCE NC IV**

Existing

3.50 Training Facilities

Based on a class intake of 25 students/trainees, below are the space requirement & their sizes:

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
1. Student/Trainee Working Space	2.50 x 2.50 per student/trainee	6.25 per student	156.25
2. Contextual Learning Laboratory/ Lecture Room	4 x 5	20	20
3. Learning Resource Center	4 x 5	20	20
4. Facilities/Equipment/ Circulation area	10 x 6	60	60
TOTAL AREA			**256.25**

Amended

3.5 TRAINING FACILITIES
ELECTRICAL INSTALLATION & MAINTENANCE NC II

Based on a class intake of 25 students/trainees, below are the space requirement & their sizes:

TEACHING/LEARNING AREAS	SIZE IN METERS	AREA IN SQ. METERS	QTY	TOTAL AREA IN SQ. METERS
Lecture Area	5 x 8	40	1	40
Laboratory Area	5 x 8	40	1	40
Learning Resource Area	4 x 5	20	1	20
Tool Room / Storage Area	4 x 5	20	1	20
Wash ,Toilet & Locker Room	1 x 2	2	2	4
Total				124
Facilities / Equipment / Circulation**				38
Total Area				**162**

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

(Disinfecting area/Portable hand wash area if possible)

II. C – TRAINER'S QUALIFICATION (TQ)

ELECTRICAL AND ELECTRONICS SECTOR	
Qualification:	**ELECTRICAL INSTALLATION AND MAINTENANCE NC IV**
Existing	**Amended**
● Be a graduate of BS in Industrial Education, Major in Electrical Technology or its equivalent ● (Must have undergone training on Training Methodology I (TM I) ● He must be a holder of at least Electrical Installation & Maintenance NC IV ● Good moral character ● Must be computer literate ● Must be physically and mentally fit ● Minimum of three (3) years relevant job/industry experience *	● Holder of National TVET Trainer Certificate I (NTTC I) in Electrical Installation & Maintenance NC IV; and ● Have at least 3 years relevant job/industry or teaching experience

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS (Amendments to Annex A in IG 055-2021)

ELECTRICAL AND ELECTRONICS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ELECTRONIC PRODUCTS ASSEMBLY AND SERVICING NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Pliers assorted, Long nose, Side cutter	1 set	Pliers assorted: • Long nose - 2 pcs • Side cutter - 2 pcs	1 set
	Screw driver assorted, Phillips, slotted	1 set	Screwdriver assorted: • Phillips – 10 pcs • Slotted – 10 pcs with multiple sizes	1 set
	Desoldering tools	1 set	Desoldering tools (2 pcs desoldering tools)	1 set
	Wrenches assorted	1 set	Wrenches assorted	1 set
	Allen wrench/key	1 set	Allen wrench/key (2 sets of star bit and 2 sets of hex)	1 set
	Utility knife/stripper	1 pc	Utility knife/stripper	2 pcs
	Test jigs	1 set	Digital Trainer	1 set
	Wire stripper	1 pc	Wire stripper	2 pcs
	Digital micrometer	1 pc	Digital micrometer	1 pc (optional)
	Anti-static strap	1 pc	Anti-static strap	2 pcs
	Anti-static brush	1 pc	Anti-static brush	1 pc
	Anti-static mat	1pc	Anti-static mat (1.5 m x 2 m)	1 pc
	Bread boards	1 set	Bread boards (2 pcs standard size bread board with power supply)	1 set
			Combinational Plier (2 pcs)	1 set
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Multimeter *(analog/digital)*	1 unit	Multimeter (Analog) *not per workstation*	10 units
			Multimeter (Digital) *not per workstation*	10 units
	Workshop table	1 set	Workshop table (any size of workshop table with outlet and breaker)	1 set
	High grade magnifying glass with lamp	1 set	High grade magnifying glass with lamp (1 table top high grade magnifying glass)	1 set
	Variable power supply	1 unit	Variable power supply (0-30 V, 3-5 A, Digital)	1 unit
	Variable transformer	1 unit	---	
	Hot air soldering station		Hot air soldering station	2 units

			not per workstation	
	Oscilloscope, digital	1 unit	Oscilloscope, digital (at least 2 channels)	1 unit
	Signal generator	1 unit	**---**	
	Function generator	1 unit	Function generator	1 unit
	Electronically-controlled soldering station	1 unit	Electronically-controlled soldering station	1 unit
			Drill bit (1/32)	10 pcs
			Drill – (Mini Drill 12V)	1 unit
			Soldering iron – 40 watts (soldering iron pen type 20-30 W)	2 units
			Soldering stand with sponge	2 pcs
			Digital Logic probes TV Monitor LED *not per workstation*	1 unit
			Microwave oven (digital) *functional, not per workstation*	1 unit
			Washing machine (digital) *functional, not per workstation*	1 unit
			CCTV H264 4 Channel Net CCTV (Monitor with 4 camera) *functional, not per workstation*	1 unit
			Light Dimmer kit (any type)	2 sets
	Recommended equipment (Optional):		**Recommended equipment (Optional):**	
	Table top reflow oven	1 unit	Table top reflow oven	1 unit
	Lead-free soldering system	1 unit	Lead-free soldering system	1 unit
	ESD free work bench with mirror back-to-back/one-sided	1 set	ESD free workbench with mirror back-to-back/one-sided	1 set
	Equipment for consumer-electronics shop/laboratory -		**Equipment for consumer-electronics shop/laboratory -**	
	Audio-video product/ appliance and component parts: ● Radio receivers ● Audio recorders ● Electronic musical instruments/keyboards ● DVD/VCD player ● Public-address (PA) systems ● Television (Home/Portable) ● PC monitors	1 Lot	Audio-video product/ appliance and component parts: ● Radio receivers ● Amplifiers (Speakers, PA systems, Megaphone, Intercom) ● Electronic musical instruments ● Videoke player ● Television (Home/Portable/Monitors)	1 Lot (At least 2 of the listed AV products/ appliances)

	Domestic electronic-controlled appliances consisting of – ● Electronic-controlled Washing Machines ● Microwave Oven ● Induction stove ● Rechargeable light ● Electronic-controlled air-conditioner/fan	1 Lot	Domestic electronic-controlled appliances consisting of – ● Electronic-controlled Washing Machines ● Microwave Oven ● Induction stove ● Rechargeable light ● Electronic-controlled air-cooler/fan	1 Lot (At least 2 of the listed domestic electronic-controlled appliances)
	Equipment for industrial electronics products and systems shop/ laboratory -		**Equipment for industrial electronics products and systems shop/ laboratory -**	
	Industrial-electronics components	1 Lot	Industrial-electronics components	1 Lot
	Industrial-electronic product/device and component parts ● Control boards and modules ● Motor controllers and drives ● Sensors and input devices ● Actuators and output devices ● Opto-electronics equipment and devices	1 Lot	Industrial-electronic product/device ● Control boards and modules ● Motor controllers and drives ● Sensors and input devices ● Actuators and output devices ● Optoelectronics equipment and devices	1 Lot (At least 2 of the listed equipment for industrial electronics products)
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Soldering wire	1 spool	Soldering wire (Lead Free), 250 g	1 spool
	SMD soldering paste	50 ml	SMD soldering paste	50 ml
	SMD soldering flux	500 ml	SMD soldering flux	500 ml
	Cleaning brush	1 pc.	Cleaning brush	1 pc
	Thinner/alcohol	1 bottle	Thinner/alcohol	1 bottle
	Thermal paste	5ml	Thermal paste	5ml
	Ferric chloride	1 bottle	Ferric chloride/ hydrogen peroxide	1 bottle
	Pale or water bucket	5 units	Pail or water bucket	2 units
	Stranded/solid/ hook-up wires	5m	Stranded/solid/ hook-up wires	5m
	wire stranded, #22, red	10m	wire stranded, #22, red	10m
	wire stranded, #22, black	10m	wire stranded, #22, black	10m
	wire stranded, #22, white	10m	wire stranded, #22, white	10m
	wire stranded, #22, blue	10m	wire stranded, #22, blue	10m
	wire stranded, #22, yellow	10m	wire stranded, #22, yellow	10m
	wire stranded, #22, green	10m	wire stranded, #22, green	10m
	Solid wires, assorted color	10m	Solid wires, assorted color	10m
	Assorted electronic components	1 set	Assorted electronic components	1 set
	resistors (different values)	50 pcs	Resistors (different values, any wattage)	50 pcs

	capacitors (different values)	50 pcs	Capacitors (different values of capacitance and voltage)	50 pcs
			Balun (alternative for BNC connector)	10 pcs
			BNC connector	10 pcs
			Battery (9V for Multitester)	10 pcs
			Battery (1.5V for Multitester)	20 pcs
			AC Cord	10 pcs
			Alligator clip	20 pcs
			Capacitor – 0.1 µf 50V	10 pcs
			Capacitor – 1000 µf 25V	20 pcs
			Diode IN4001	40 pcs
			IC Voltage Regulator - 7812	10 pcs
			IC Voltage Regulator - 7805	10 pcs
			Solder wire SnPb –	1 roll
			Masking Tape	1 roll
			Printed Circuit Board (PCB) 3 x 4 – 1.5 x 2 single sided	10 pcs
			Presensitise PCB 4x6 single side (for eCAD users)	Optional
			Resistor – 1 ohm 1 W	10 pcs
			Switch	10 pcs
			Transformer – 750mA	5 pcs

Note: Tools, Equipment & Materials are on a per-workstation basis

II. B - TRAINING FACILITIES (TF)

ELECTRICAL AND ELECTRONICS SECTOR

Qualification : ELECTRONIC PRODUCTS ASSEMBLY AND SERVICING NC II

Existing

3.5 TRAINING FACILITIES

Recommended space requirements for the various teaching/learning areas are as follows:

TEACHING/LEARNING/ FACILITIES AREAS	SIZE IN METERS	QTY	TOTAL AREA IN SQ. METERS
Lecture Area*	5 x 5	1	25
Workshop Area** (2trainees per Workstations) 1.5m x 2m	5 x 5 / 9 x 5	5 workstations / 10 workstations	25 / 45
Learning Resource Area	4 x 5	1	20
Tool Room/Storage Area	4 x 4	1	16
Wash ,Toilet & Locker Room	2 x 3	2	12
Sub- Total			98 / 118
Facilities / Equipment / Circulation***			30 / 36
Total Area		5 workstations / 10 workstations	128 / 154

** Optional (good for minimum of 10 trainees)*
*** For the workshop area (maximum of 20 trainees)*
****Area requirement is equivalent to 30% of the total teaching/learning areas*

Amended

3.5 TRAINING FACILITIES

Recommended space requirements for the various teaching/learning areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Leacture Area*	5 x 5	1	25
Workshop Area** 92 trainees per workstations) 1.5m X 2m	5 x 5 / 9 x 5	5 workstations / 10 workstations	25 / 45
Learning Resource Area		1	15
Tool Room/Storage Areas		1	8
Wash, Toilet & Locker Room		2	12
Sub-Total			**85 / 105**
Facilities / Equipment / Circulation Area***			26 / 32
Total Area		5 workstations / 10 workstations	**111 / 137**

II. C – TRAINER'S QUALIFICATION (TQ)

ELECTRICAL AND ELECTRONICS SECTOR

Qualification: ELECTRONIC PRODUCTS ASSEMBLY AND SERVICING NC II

Existing

- Holder of National TVET Trainer's Certificate (NTTC) Level 1
- Must have at least 2-years relevant industry experience.

Amended

- Holder of National TVET Trainer's Certificate (NTTC) Level 1 in Electronic Products Assembly and Servicing NC II; and
- Must have at least 2-years relevant industry experience.

For RENEWAL:

- Work Immersion / relevant seminars/refresher training will be accepted as part of the requirements for renewal.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

GARMENTS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
DRESSMAKING NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Tape Measure	25 pcs	Tape Measure, calibrated	25 pcs
	Hip- curve	25 pcs	Hip- curve, medium size, sturdy	15pcs
	Meter stick	10 pcs	Meter stick, 1m, sturdy	5 pcs
	French curve	25 pcs	French curve, 12-23cm, sturdy	25 pcs
	L-square	25 pcs	L-square	15pcs
	Transparent ruler with grid 24	25 pcs	Transparent ruler with grid, 24”	25 pcs
	Scissors	25 pairs	Scissors, large	25 pairs
	Cutting Shears	25 pairs	Cutting Shears, large, 9-12” long	25 pairs
			Pinking shears, large, 9-12” long	10 pairs
			Thread clipper, 5” long	25 pairs
	Basin/Pail	10 pcs	Basin 20’’ diameter	15 pcs
	Sewing Box	25 pcs	Sewing Box with compartments, at least 15” long	25 pcs
	Tracing wheel	25 pcs	Tracing wheel	25 pcs
	Hanger	10 doz	Hanger for top	5 doz
			Clip hanger	5 doz
	Screw Driver flat (medium)	25 pcs	Screw Driver flat (medium)	25 pcs
	Screw Driver flat (small)	25 pcs	Screw Driver flat (small)	25 pcs
	Triangle 16” 45° x 90°	25 pcs	Triangle 16” 45° x 90°	25 pcs
	Hand Spray	5 pcs	Spray bottle, 100ml	5 pcs
	Seam Ripper	25 pcs	Seam Ripper	25 pcs
	Pin Cushion	25 pcs	Pin Cushion	25 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Single Needle Lockstitch Machines	25 units	Single Needle Lockstitch Machines	25 units
	High Speed Machines Attachment	10 units	High Speed Machines Attachment (attachment includes: zipper, hemming foot, button hole, compensating foot (right and left), shirring foot. *Note: 1 unit is equivalent to 1 set.*	10 units
	3 Threads over lock machine	5 units	3 Threads over lock machine	5 units
	Flat Iron	5 units	Flat Iron	5 units

	Steam Press	5 units	Steam Press	3 units
	Ironing Board	5 units	Ironing Board, portable	5 units
	Cutting Table	10 units	Cutting Table (1.5 m width x 2 m long)	10 units
	Stools	25 pcs	Stools	25 pcs
	Button Holer	1 pc	---	
	Body Form/Model	10 units	Female Body Form/Model with two arms	10 units
	Calculator	25 pcs	Calculator	25 pcs
	Hanger Rack	3 units	Hanger Rack	3 units
	Bobbin Case	25 pcs	Bobbin Case	25 pcs
	Bobbin Spool	50 pcs	Bobbin Spool	50 pcs
	Button holer Attachments	5 pcs	---	
	Zipper foot	5 pcs	---	
	Zipper foot invisible	5 pcs	---	
	Shirring foot	5 pcs	---	
	Sleeve Board/Ham	10 pcs	Sleeve Board/Ham	5 pcs
	Display Cabinet	2 pcs	Wooden Cabinet with sliding door (Display Cabinet)	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Pencils	25 pcs	Pencils	25 pcs
	Pattern Paper	25 rolls	Pattern Paper	25 rolls
	Tailor's Chalk	25 pcs	Tailor's Chalk	25 pcs
	Dressmaker's Tracing Paper	25 packs	Dressmaker's Tracing Paper	25 packs
	Thread (assorted colors)	75 cones	Thread (assorted colors)	75 cones
	Buttons	2 gross	Buttons	2 gross
	Zipper 8"	75 pcs	Zipper 8"	50 pcs
			Zipper 6"	50 pcs
	Record Book	25 pcs	Record Book, pp50	25 pcs
	Zipper 20"	75 pcs	Zipper 20"	50 pcs
	Fusible Interlining	12.5 yds	Fusible Interlining	12.5 yds
	Band Roll	2 rolls	Band Roll	3 rolls
	Hook and Eye (big)	1 box	Hook and Eye (big)	1 box
	Hook and Eye (Small)	1 box	Hook and Eye (Small)	1 box
	Machine Oil	3 gals	Machine Oil	3 gals
	Eraser	25 pcs	Eraser	25 pcs
	Needle DB x1 # 14	8 packs	Needle DB x1 # 14	8 packs
	Needle DB x1 # 11	4 packs	Needle DB x1 # 11	4 packs
	Needle DCx1 # 14	3 packs	Needle DCx1 # 14	3 packs

	Needle DPx5# 14	3 packs	Needle DPx5 #14	3 packs
	Hand Needle	3 packs	Hand Needle	3 packs
	Fabrics for Blouse		Polycotton blend	25 meters
	Fabric for Skirt		Cotton blended	25 meters
	Fabric for Dress		Coco Cloth	25 meters
	Clothes line	10 m	Clothes line	10 m
	Pin	2 boxes	Pin with head	2 boxes

NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.

II. B - TRAINING FACILITIES (TF)

GARMENTS SECTOR

Qualification : DRESSMAKING NC II

Existing

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			176.25 sq. m.
Student/ Trainee Working Space	1.5 x 1.5 m.	2.25 sq. m.	56.25 sq. m
Lecture/ Demo Room	1.5 x 2 m.	3 sq. m.	78 sq. m.
Learning Resource Center	3 x 5 m.	15 sq. m.	15 sq. m.
Facilities/ Equipment/ Circulation Area	1.5 x 2 m.	3 sq. m.	27 sq. m.

Amended

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building			
Lecture Room/ Workshop	3.00 x 3.00 per student/ trainee	9.00 per student	225
Learning Resource Center	4.00 x 5.00	20	20
Activity Room			
• Wash room	2.00 x 1.00	2	2
• Store room	4.00 x 4.00	16	16
• Rest room (male, female & PWD)	3.00 x 4.00	12	12
• Facilities/ Equipment/ Circulation Area (30% of teaching accommodation)	1.50 x 2.00	3	27
		TOTAL	**300**

NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner-companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

GARMENTS SECTOR	
Qualification:	**DRESSMAKING NC II**
Existing	**Amended**
To qualify as trainer for dressmaking NC II, the person must: ● be a holder of NC III or its equivalent ● have undergone training on Training Methodology II (TM II) ● be physically and mentally fit ● have at least 2 years job/industry experience *Optional. Only when required by the hiring institution* Reference: TESDA Board Resolution No. 2004 03	New trainer ● Must be a holder of National TVET Trainer Certificate I (NTTC I) on Dressmaking NC II; and ● Must have at least 2 years' industry experience within the last 5 years Existing trainer ● Must be a holder of National TVET Trainer Certificate I (NTTC I) on Dressmaking NC II; and ● Must have at least 2 years' industry experience within the last 5 years OR have at least 180 hours industry immersion within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

GARMENTS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
FASHION DESIGN (APPAREL) NC III	*Cutting Shear 8-12 inches	2pcs	*Cutting Shear, 8-12 inches	2 pcs
	Round plastic Basin	5 Small 1 Large	Round plastic Basin (small)	5 pcs
			Round plastic Basin (large)	1 pc
	Plastic Pail	5 Medium	Plastic pail (medium)	5 pcs
	*Scissors (Paper) 6-8 inches	2pcs	*Scissors (Paper), 6-8 inches	2 pairs
	White Board Eraser	3 units	---	
	*Tape Measure 60 inches	2 pcs	*Tape Measure, 60 inches	2 pcs
	* Metal Hip Curve	2 pcs	*Metal Hip Curve	2 pcs
	*Wood Meter Stick	2pcs	*Meter Stick	2pcs
	* Metal French Curve	2 pcs	*French Curve	2pcs
	Pinking Shears	1 pcs	Pinking Shears	1 pair
	*Transparent Ruler (with grid) – 24”	2pcs	*Ruler (with grid) – 24”	2 pcs
	*Sewing Box 14 inchesX6X4	2pcs	*Sewing Box with compartments, at least 15” long	25 pcs
	*Metal Tracing wheel with wood or plastic handle	2pcs	Tracing wheel	25 pcs
	Plastic Hanger	25pcs	Hanger for top	25 pcs
	Screw driver Flat (medium)	10 pcs	Screw driver Flat (medium)	10 pcs
	*Plastic Triangle 16” 45°X90^{o}	2pcs	*Plastic Triangle 16” 45°X90^{o}	2 pcs
	Water Hand spray	2 pc	Spray bottle	2 pcs
	*Metal Seam Ripper with plastic handle	2pcs	Seam Ripper	2 pcs
	*Emery bag	2pcs	Pin cushion	2 pcs
	*Metal L-Square	2pcs	L-Square	2 pcs
	*Bobbin case	10 pcs	*Bobbin case	10 pcs
	Battery operated Calculator-6digit	2units	Calculator	2 units
	*Bobbin spool	10 pcs	---	
	Hanger, assorted types & sizes (for packaging demonstration)	1 sample set	---	
	Metal clothes rack	2 pcs	Clothes rack	2 units
			Clip hanger	25 pcs
			Gun tag	2 pcs
	Equipment		**Equipment**	

	Description	Qty	Description	Qty
	Plastic or wood or metal chairs with back rest	25units	Chairs with back rest with wheels	25 units
	Medium Fiberglass Model Body Form	1 pcs	Medium Model Body Form (female)	2 pcs
			Medium Model Body Form (male)	2 pcs
	Display Cabinet, glass-door, w/ shelves, 6'X4'X1'	1unit	Display Cabinet, glass-door, w/ shelves	1 unit
	Personal Computer G41T-R3-1333/ 1066/800MHZ, Conroe/Presler/ Wolfdale/Yorkfield Series w/ complete accessories	2 units	Desktop Computer, intel pentium i5, 256GB SSD/1TB HDD, 16GB RAM	5 units
	Printer – HP Laser Jet Pro, P1102 printer series	1unit	Printer, network capable, colored, with scanner	1 unit
	White Board 8'X4'	3 pcs	---	
	Lecture Table L5' x W2.5' x H2.5'	13 units	Lecture Table, L5 ft x W2 ft x H2.5ft	13 units
	High-speed Sewing (Single Needle Lockstitch)	10 units	High-speed Sewing (Single Needle Lockstitch)	25 units
	High Speed Sewing Machines Attachment (Zipper, Edging)	10 units	High Speed Sewing Machines Attachment (Zipper foot, Button Holer Attachment)	15 units
	3 Thread Overlock Machine	1unit	3 Thread Overlock Machine	3 units
	Flat Iron	2unit	Flat Iron	5 units
	Ironing Board	2 unit	Ironing Board	5 units
	Cutting Table, 4ft x 8ft x 3ft, Formica-topped/smooth surface finished	3 units	Cutting Table, 4ft x 8ft x 3ft, with smooth surface finished	3 units
	Stools (for laboratory room)	15 units	Stools (for laboratory room)	25 units
	Button Holer Attachment	1 unit	---	
	Hanger Rack	1	Hanger Rack	3 units
	Sleeve Board/Ham	1unit	Sleeve Board/Ham	5 units
			Camera - 12 Megapixel	1 unit
			microSD card 32GB	2 units
			Card reader	1 unit
			USB Drive, 8GB	2 units
			Design software	1 lot
			Medium size Dress form up to 2nd Hip (male)	5 units
			Medium size Dress form up to 2nd Hip (female)	5 units
			Life Size Mirror	2 units
	Materials		**Materials**	

	Description	Qty	Description	Qty
	*HB No.2 Pencil	5 pcs	*HB No.2 Pencil	2 pcs
	*Pencil Eraser	5 pcs	*Pencil Eraser	2 pcs
	*Sketching/Illustration Paper, “Oslo”, A4 (@100shts/trainee)	1ream	*Oslo paper	1 pack
	*Colored Pencils, 12colors/set	2 sets	*Colored Pencils, 12colors/set	1 set
	*Water Color (12 colors/set)	2 sets	*Water Color, 12 colors/set	1 set
	*Paint Brush Set (fine,medium,wide)	2 sets	*Paint Brush Set (fine, medium, wide)	1 set
	Fabric(textile) Paint, 1L,ea. of primary colors & white	1 set	Fabric (textile) Paint, 1L, each of primary colors (red, yellow, blue & white)	1 set
	White Board Marker, (3 colors)	1 box	White Board Marker	1 box
	*Illustration Board, 1/8”	10 pcs	*Illustration Board, 1/8”	5 pcs
	Assorted Fabric Swatches, (natural- animal, plant & synthetic),1 yard ea.	1 pc per type	Assorted Fabric Swatches, (natural-animal, plant & synthetic)	1 yard per type
	*Pattern Paper, 2’X4’	20 sheets	*Pattern Paper, 2’X4’	20 sheets
	Tailor’s chalk (white, blue, orange, yellow)	2 each	Tailor’s chalk (white, blue, orange, yellow)	2 pcs/color
	Dressmaker’s Tracing Paper,	2 sets	Dressmaker’s Tracing Paper	2 sets
	Thread (6-10 Assorted colors)	3cones/ color	Thread (6-10 Assorted colors)	3 cones/ color
	Buttons, assorted shapes & sizes	1 sample set	Buttons, assorted shapes & sizes	1 sample set
	Zipper, assorted types (e.g. metal, nylon, jacket, invisible or ordinary) & sizes	1 sample set	Zipper, assorted types (e.g. metal, nylon, jacket, invisible or ordinary) & sizes	1 sample set
	Record book	1pc	Record book, pp50	1 pc
	Different Interlining (fusible and non-fusible)	1 yard each	Interlining, fusible, woven	1 yard
			Interlining, non-fusible, tellon	1 yard
	Different sizes Band Roll and garters	1 yard each	Different sizes Band Roll and garters	1 yard each
	Hook & Eye (big & small)	1 sample set	Hook & Eye (big)	1 sample
			Hook & Eye (small)	1 sample
	Sewing Machine Oil	1 gallon	Sewing Machine Oil	3 gallons
	*Needle DBX1 #14	1 pack	*Needle DBX1 #14	1 pack
	*Needle DCX1 #11	1 pack	*Needle DCX1 #11	1 pack
	*Needle DPX1 #14	1 pack	*Needle DPX1 #14	1 pack
	*Needle DPX5 #14	1 pack	*Needle DPX5 #14	1 pack
	*Hand Needles	1 pack	*Hand Needles	1 pack
	Fabric for Blouse (Woven)	2 yards	Fabric for Blouse (Woven)	2.5 yards per trainee

	Fabric for Skirt (Woven)	2 yards	Fabric for Skirt (Woven)	1.5 yards per trainee
	Fabric for Dress (Woven)	3 yards	Fabric for Dress (Woven)	3 yards per trainee
	*Pins with heads and without heads	1 box each	*Pins with heads and without heads	1 box each
	Assorted trimmings	1 sample set	Assorted trimmings	1 sample set
	Muslin (Cheese cloth)	30 yards	Muslin (Cheese cloth)	1 roll
	Boxes, assorted types & sizes	1 sample set	Boxes, assorted types & sizes	1 sample set
	Tissue paper & board inserts	1 sample set	Tissue paper & board inserts	1 sample set
	Different adhesive Tapes for Packaging	1 roll each	Adhesive Tapes for Packaging	1 roll each
	Garment bag, assorted types & sizes	1 sample set	Garment bag, non-woven, plastic and cloth	1 sample set
	Plastics, assorted types & sizes	1 sample set	Plastics, assorted types & sizes	1 sample set
	Assorted Care label	1 sample set each	Assorted Care label	1 sample set each
	Paper bags, assorted types & sizes	1 sample set	Paper bags, assorted types & sizes	1 sample set
	Gun tags	1 pc	---	
			Tag pins	1 box

NOTE: *Should be provided by trainees

II. B - TRAINING FACILITIES (TF)

GARMENTS SECTOR

Qualification : FASHION DESIGN (APPAREL) NC III

Existing

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			176.25 sq. m.
Student/ Trainee Working Space	1.5 x 1.5 m.	2.25 sq. m.	56.25 sq. m
Lecture/ Demo Room	1.5 x 2 m.	3 sq. m.	78 sq. m.
Learning Resource Center	3 x 5 m.	15 sq. m.	15 sq. m.
Facilities/ Equipment/ Circulation Area	1.5 x 2 m.	3 sq. m.	27 sq. m.

Amended

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building			
Lecture Room/ Workshop	3.00 x 3.00 per student/ trainee	9.00 per student	225
Learning Resource Center	4.00 x 5.00	20	20
Activity Rooms			
• Wash room	2.00 x 1.00	2	2
• Store room	4.00 x 4.00	16	16
• Rest room (male, female & PWD)	3.00 x 4.00	12	12
• Facilities/ Equipment/ Circulation Area (30% of teaching accommodation)	1.50 x 2.00	3	27
		TOTAL	**300**

NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

GARMENTS SECTOR	
Qualification:	**FASHION DESIGN (APPAREL) NC III**
Existing	**Amended**
To qualify as trainer for Fashion Design (Apparel) NC III, the person must: ● be a holder of National TVET Trainer Certificate Level I (NTTCI)) ● be a certified Fashion Design (Apparel) NC III or equivalent qualification ● be physically and mentally fit ● * have at least 5 years relevant job/ industry experience * Optional. Only when required by the hiring institution Reference: TESDA Board Resolution No. 2004 03	● Must be a holder of National TVET Trainer Certificate I (NTTC I) on Fashion Design (Apparel) NC III; and ● Must have at least 2 years' industry experience within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

GARMENTS SECTOR				
Qualification	**Existing TEM**		**Amended**	
TAILORING NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Tape Measure	25 pcs	Tape Measure, calibrated	25 pcs
	Hip- curve	25 pcs	Hip- curve, medium size, sturdy	15 pcs
	Meter stick	15 pcs	Meter stick, 1m, sturdy	5 pcs
	French curve	25 pcs	French curve, 12-23cm	25 pcs
	Scissors (6 ")	25 pairs	Scissors, large	25 pairs
	L- Square	25 pcs	L-square	15 pcs
	Pinking Shears	10 pairs	Pinking shears, large, 9-12" long	10 pairs
	Cutting Shears (8")	25 pairs	Cutting Shears large, 9-12" long	25 pairs
	Ruler with grid (24")	25 pcs	Transparent, Ruler with grid (24")	25 pcs
	Triangle 16" (45° 90°)	25 pcs	Triangle 16" (45°x90°)	25 pcs
	Seam Ripper	25 pcs	Seam Ripper	25 pcs
	Sewing Box	25 pcs	Sewing Box with compartments, at least 15" long	25 pcs
	Screw Driver Flat (medium size)	25 pcs	Screw Driver Flat (medium size)	25 pcs
	Screw Driver Flat (small size)	25 pcs	Screw Driver Flat (small size)	25 pcs
	Spray Bottle	5 pcs	Spray Bottle, 100ml	15 pcs
	Hanger	10 Doz.	Hanger for top	5 doz
	Tracing Wheel	25 pcs	Tracing Wheel	25 pcs
			Clip hanger	5 doz
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Single Needle Lockstich machines	25 units	Single Needle Lockstich machines	25 units
	3 Threads over lock machine	5 pcs	3 Threads over lock machine	5 units
	Bar Tack Machine	1 units	Bar Tack Machine	1 unit
	Feed of the Arm machine	1 unit	Feed of the Arm Machine	1 unit
	Flat Iron	5 units	Flat Iron	5 units
	Ironing Board	5 units	Ironing Board, portable	5 units
	Steam Press	5 units	Steam Press	3 units
	Sleeve Board/ Ham	5 units	Sleeve Board/ Ham	5 units
	Model Form	10 units	Male Body Form/ Model with two arms	10 units
	Life Size Mirror	2 units	Life Size Mirror	2 units
	Bobbin Case	25 pcs	Bobbin Case	25 pcs

	Bobbin Spool	50 pcs	Bobbin Spool	50 pcs
	Hanger Rack	3 units	Hanger Rack	3 units
	Gauge Foot 1/4	5 pcs	---	
	Gauge Foot 1/16	5 pcs	---	
	Calculator	25 pcs	Calculator	25 pcs
	Wooden Cabinet with sliding door(Display Cabinet)	2 units	Wooden Cabinet with sliding door (Display Cabinet)	2 units
			High Speed Machines Attachment (attachment includes: zipper, hemming foot, buttonholer, button sew, compensating foot (right and left), shirring foot. Note: 1 unit is equivalent to 1 set.	10 units
			Cutting Table (1.5 m width x 2 m long)	10 units
			Stools	25 pcs
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Pattern paper	25 Rolls	Pattern paper	25 rolls
	Tailor's Chalk	25 pcs	Tailor's Chalk	25 pcs
	Tracing paper	25 packss	Dressmaker's Tracing Paper	25 packs
	Pencil	25 pcs	Pencil	25 pcs
	Eraser	25 pcs	Eraser	25 pcs
	Thread (assorted colors)	75 pcs	Thread (assorted colors)	75 pcs
	Needle DB1x11	8 packs	Needle DB x1 # 11	4 packs
	Needle DB 1 x 14	8 packs	Needle DB x1 # 14	8 packs
	Needle DC 1x14	3 packs	Needle DC x1 # 14	3 packs
			Needle DP x 5 # 14	3 packs
	Needle TV 1 x14	1 pack	---	
	Fusible Interlining	12.5 yards	Interlining, fusible, woven	1 yard
			Interlining, non-fusible, tellon	1 yard
	Band Roll	3 Rolls	Band Roll	3 rolls
	Fabric (tetoron)	37.5 yrds	Fabric (for tops)	100 m
	Fabric (Chinese Cotton)	75 yards	Fabric (for bottoms)	150 m
	Fabric (coco)	10 yards	Fabric (coco)	10 yards
	Fabric (for pants and shorts)	120 yards	Fabric (for pants and shorts)	120 yards
	Fabric (for jogging pants)	37.5 yards	Fabric (for jogging pants)	37.5 yards
	Garter 1 ½"	3 rolls	Garter 1 ½"	3 rolls
	Zipper 6"	150	Zipper 6"	50 pcs
			Zipper 8"	50 pcs

			Zipper 20”	50 pcs
	Hook and Eye	2 boxes	Hook and Eye (big)	1 box
			Hook and Eye (small)	1 box
	Machine Oil	3 gal.	Machine Oil	3 gal.
	Hand Needle	3 packs	Hand Needle	3 packs
	Buttons Flat	2 boxes	Buttons Flat	2 gross
			Record Book, pp50	25 pcs
			Pin with head	2 boxes
			Clothes line	10 m

II. B - TRAINING FACILITIES (TF)

GARMENTS SECTOR

Qualification : TAILORING NC II

Existing

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			176.25 sq. m.
Student/ Trainee Working Space	1.5 x 1.5 m.	2.25 sq. m.	56.25 sq. m
Lecture/ Demo Room	1.5 x 2 m.	3 sq. m.	78 sq. m.
Learning Resource Center	3 x 5 m.	15 sq. m.	15 sq. m.
Facilities/ Equipment/ Circulation Area	1.5 x 2 m.	3 sq. m.	27 sq. m.

Amended

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/ trainees, the space requirements and their corresponding sizes are as follows.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
A. Building			
Lecture Room/ Workshop	3.00 x 3.00 per student/ trainee	9.00 per student	225.00
Learning Resource Center	4.00 x 5.00	20.00	20.00
Activity Room			
• Wash room	2.00 x 1.00	2.00	2.00
• Store room	4.00 x 4.00	16.00	16.00
• Rest room (male, female & PWD)	3.00 x 4.00	12.00	12.00
• Facilities/ Equipment/ Circulation Area (30% of teaching accommodation)	1.50 x 2.00	3.00	27.00
		TOTAL	**300.00**

NOTE: Access to and use of equipment/ facilities can be provided through cooperative arrangements or MOA with other partner- companies/ institutions.

II. C – TRAINER'S QUALIFICATION (TQ)

GARMENTS SECTOR		
Qualification:	**TAILORING NC II**	
Existing		**Amended**
To qualify as trainer for Tailoring NC II, the person must: ● be a holder of NC III or its equivalent ● have undergone training on Training Methodology II (TM II) ● be physically and mentally fit ● *have at least 2 years job/industry experience * Optional. Only when required by the hiring institution Reference: TESDA Board Resolution No. 2004 03		New trainer ● Must be a holder of National TVET Trainer Certificate I (NTTC I) in on Tailoring NC II; and ● Must have at least 2 years' industry experience within the last 5 years Existing trainer ● Must be a holder of National TVET Trainer Certificate I (NTTC I) in on Tailoring NC II; ● Must have training certificate on Facilitate eLearning Session; and ● Must have at least 2 years' industry experience within the last 5 years OR at least 180 hours industry immersion within the last 5 years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
ICE PLANT REFRIGERATION SERVICING NC III	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Push and Pull Rule	10 sets	Push and Pull Rule	10 sets
	Meter stick	10 sets	Steel rule, 2 ft.	5 pcs
	Spirit level/water level	10 sets	Spirit level/water level	10 sets
	Screw driver	10 sets	Screwdriver, flat	10 pcs
			Screwdriver, philips	10 pcs
	Pliers	10 sets	Pliers, long nose	10 pcs
			Pliers, diagonal	10 pcs
	Wrench Box	10 pcs	Wrench Box	10 pcs
	Crimping tools	10 pcs	Crimping tools	10 pcs
	Bending tool	10 sets	Tube bender (lever type), 5/8	2 pcs
			Tube bender (lever type), 1/2	3 pcs
			Tube bender (lever type), 5/16	3 pcs
			Tube bender (lever type), 3/8	3 pcs
			Tube bender (lever type), 1/4	3 pcs
			Tube bender (spring type)	3 sets
	Swaging tool	10 sets	Swaging tool	10 sets
	Flaring tool	10 sets	Flaring tool	10 sets
	Tube cutters	10 sets	Tube cutters	10 sets
	Vernier caliper	10 units	Vernier caliper	2 units
	Adjustable wrench	10 units	Adjustable wrench 8”	5 pcs
			Adjustable wrench 10”	5 pcs
	Open end wrench	10 sets	Open wrench, metric	2 sets
			Open wrench, English	2 sets
			Ratchet wrench (service valve)	5 pcs
			Monkey wrench, adjustable	5 pcs
	Multi-tester	10 units	Multi-tester, digital	5 units
			Multi tester, analog	5 units
	Clamp ammeter	10 sets	Clamp ammeter, digital	5 units
			Clamp ammeter, analog	5 units
	Megger tester	5 sets	Megger tester	1 set
	Leak detector	5 units	Leak detector	3 units
	System analyzer	10 units	System analyzer (gauge manifold), multi	5 units
	Digital thermometer	10 units	Digital thermometer	5 units
	Equipment		**Equipment**	

	Description	Qty	Description	Qty
	Vacuum pump	5 units	Vacuum pump	3 units
	Evaporator fan and motor	5 sets	Mini cooling tower	1 unit
	Oxy-Acetylene welding outfit	5 units	Oxy-Acetylene welding outfit	5 units
	Evaporator fan and motor	5 units	Water pump for cooling tower	1 unit
	Condenser fan motor	5 units	Shell & Tube condenser	1 unit
	Overload protector	2 units	Overload protector	2 units
	Arc welding machine	3 units	Arc welding machine	3 units
	Recovery/recycling machine	5 units	Recovery/recycling machine, 220v	2 units
			Ice tank for brine approx.3' x 4' x 2.5' with agitator and motor for agitator, preferably belt driven, with wheel caster	1 unit
			Ice mold, stainless, 2' x 1' x 6"	9 pcs
			Condensing unit, low temp, HFC 404A, with liquid receiver, 2.5 HP	1 unit
			Nitrogen regulator	2 sets
			Motor compressor	5 units
			High Pressure washer	2 units
			Personal protective equipment	25 sets
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Condensate drain	25 sets	Condensate drain	25 sets
			Agitator	1 unit
	Electrical wire	10 sets	Electrical wire, 2.5 mm	2 rolls
			Electrical wire, 3.5 mm	2 rolls
			Electrical wire, 1.5 mm	2 rolls
			Electrical wire, 4.0 mm	2 rolls
	Circuit breaker/safety switch	5 units	Circuit breaker/safety switch	5 units
	Wiring diagrams	25 sets	Wiring diagrams	25 sets
	Courseware (Learning elements and Manuals)	25 sets	Courseware (Learning elements and Manuals)	25 sets
	Switch	10 sets	Switch	10 sets
	Capacitor	10 sets	Capacitor	10 sets
	Relay	10 sets	Relay	10 sets
	Philippine Electrical Code	5 sets	Philippine Electrical Code	5 sets
	Electrical tape	10 sets	Electrical tape	10 sets
	Air filters	15 sets	Air filters	15 sets
	Requisition slip	25 sets	Requisition slip	25 sets
	Oil	5 liters	Oil	5 liters

	Grease	5 units	Grease	5 units
	Rags	10 boxes	Rags	10 boxes
	Soap	10 boxes	Soap	10 boxes
	Sand paper	25 sets	Sand paper	25 sets
	Refrigerant cylinder	5 units	Refrigerant cylinder	5 units
	Nitrogen gas	5 units	Nitrogen gas	5 units
	Personal protective equipment	25 sets	Personal protective equipment	25 sets
	Tubes (Copper steel, Aluminum relevant to required activity task.	25 sets	Tubes, Copper, 0.028 in. x ¼", x 50 ft.	5 rolls
			Tubes, Copper, 0.028 in. x 5/16" x 50 ft.	5 rolls
			Tubes, Copper, 0.028 in. x 3/8" x 50 ft.	5 rolls
			Tubes, Copper, 0.028 in. x ½" x 50 ft.	5 rolls
			Tubes, Copper, 0.028 in. x 5/8" x 50 ft.	5 rolls
			Tubes, Copper, 0.028 in. x ¾" x 50 ft.	5 rolls
			Tubes, Aluminum, 5/16"	5 kilos
	Filler rolls (Bronze , Steel, Aluminum Relevant to required activity/ task	25 sets	Filler rods, Aluminum	100 pcs
			Filler rods, Bronze	100 pcs
			Filler rods, Silver	100 pcs
	Fluxes (Borax, Aluminum and Silver)	10 sets	Fluxes, Aluminum	2 cans
			Fluxes, Borax	2 cans
			Fluxes, Silver	2 cans
	Fittings	25 boxes	Fittings	25 boxes
	Strike lighter	15 units	Strike lighter	15 units
	Defective electrical controls	10 sets	---	
	Timer	5 sets	Timer	5 sets
	Rotary switch	10 sets	Rotary switch	10 sets
	Pull-push switch	10 units	Pull-push switch	10 units
	Thermostat	10 units	Thermostat	10 units
	Good condition electrical controls	10 sets	Good condition electrical controls	10 sets
	Switch pull-push/rotary	10 sets	Switch pull-push/rotary	10 sets
	Defective capacitators	10 sets	---	
	Filter	25 sets	Filter	25 sets
	Borax	5 sets	Borax	5 sets
	Filter drier	25 sets	Filter drier	25 sets
	Tapelone tape	25 sets	Teflon tape	25 sets
	Copper elbow	30 pcs.	Copper elbow	30 pcs.
	Copper onion	20 pcs.	Copper onion	20 pcs.
	Copper elbow 3/8" OD	10 pcs.	Copper elbow 3/8" OD	10 pcs.

	Filter drier connection	20 pcs.	Filter drier connection	20 pcs.

II. B - TRAINING FACILITIES (TF)

HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION SECTOR	
Qualification :	**ICE PLANT REFRIGERATION SERVICING NC III**

Existing

3.5 TRAINING FACILITIES
ABSORPTION REFRIGERATION SERVICING NC III

Based on a class intake of 25 students/trainees.

SPACE REQUIREMENTS	Space (m)	Area in Sq. Meters	Total Area in Sq. Meters
A. LECTURE AREA*	4.00 x 8.00	32.00	32.00
B. LEARNING RESOURCE AREA	4.00 x 6.00	24.00	24.00
C. TOOL/STORAGE AREA*	4.00 x 4.00	16.00	16.00
D. WASH, TOILET AND LOCKER ROOM*	3.00 x 4.00	12.00	12.00
TOTAL			84
E. FACILITIES/ EQUIPMENT/ CIRCULATION			25
TOTAL AREA			**109**

*Common facilities for all HVAC/R Courses

Amended

3.5 Training Facilities

Based on a class intake of 25 trainees.

Space Requirement	Size in meters	Area in Sq. meters	Total area	**Grand Tota (m^2)**
Lecture room	4.0 x 8.0	32.0	32.0	32.0
Learning resource	4.0 x 6.0	24.0	24.0	24.0
Store Room	4.0 x 4.0	16.0	16.0	16.0
Wash Room	3.0 x 4.0	12.0	12.0	12.0.
Laboratory (mini-ice-plant set-up)	4.0 x 8.0	32.0	32.0	32.0
Grand Total				**116.0**

(Disinfecting area/Portable hand wash area if possible)

II. C – TRAINER'S QUALIFICATION (TQ)

HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION SECTOR	
Qualification:	**ICE PLANT REFRIGERATION SERVICING NC III**
Existing	**Amended**
• Must have undergone training on Training Methodology III or equivalent training/experience • He must be a holder of Ice Plant Refrigeration Servicing NC III or equivalent training/experience • Good moral character • Must be physically and mentally fit • Must be computer literate • Must be a Civil Service eligible (for government position or appropriate professional license issued by the Professional Regulatory Board) • *Must have at least two (2) years job/industry experience *Optional: Only when required by the hiring institution	• Must be National TVET Trainers Certificate (NTTC) Level 1 Holder in Ice Plant Refrigeration Servicing NC III; • Must be physically and mentally fit; • Must be computer literate; and • Must have at least two (2) years related industry experience

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

HUMAN HEALTH/HEALTH CARE SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
OPHTHALMIC LENS SERVICES NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Precision screw drivers (1:1)	25 sets	Precision screw drivers (1:1)	25 sets
	Ophthalmic pliers (1:5)	5 sets	Ophthalmic pliers (1:5)	5 sets
	Needle files (1:5)	5 sets	Needle files (1:5)	5 sets
	Diamond cutter	5 pcs	Diamond cutter	5 pcs
	Precision nut drivers (1:1)	25 sets	Precision nut drivers (1:1)	25 sets
	PPE (lab. Gowns, face mask, safety goggles, gloves) (1:1)	25 sets	PPE (lab. Gowns, face mask, safety goggles, gloves) (1:1)	25 sets
	Lens measure/clock (1:5)	5 pcs	Lens measure/clock (1:5)	5 pcs
	Precision dial caliper (1:5)	5 pcs	Precision dial caliper (1:5)	5 pcs
	Centration charts (1:1)	25 pcs	Centration charts (1:1)	25 pcs
	Frame heater (1:5)	5 pcs	Frame heater (1:5)	5 pcs
	PD ruler (1:1)	25 pcs	PD ruler (1:1)	25 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Manual edger (1:5)	5 units	Manual edger (1:5)	5 units
	Automatic edger (*with tracer) (1:25)	1 unit	Automatic edger (*with tracer) (1:25)	1 unit
	Lens blocker (1:25)	1 unit	Lens blocker (1:25)	1 unit
	Lens meter (manual or computerized) (1:5)	5 units	Lens meter (manual or computerized) (1:5)	5 units
	Grooving machine	2 units	Grooving machine	2 units
	Tinting/UV unit with complete accessories (1:25)	1 unit	Tinting/UV unit with complete accessories (1:25)	1 unit
	Hand polishing machine (1:12)	2 units	Hand polishing machine (1:12)	2 units
	Precision drill press (1:12)	2 units	Precision drill press (1:12)	2 units
	Curing oven (1:25)	1 unit	Curing oven (1:25)	1 unit
	UV meter (1:25)	1 unit	UV meter (1:25)	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Set of lenses (single vision, bifocal, progressive, polycarbonate) (1:5)	25 sets	Set of lenses (single vision, bifocal, progressive, polycarbonate) (1:5)	25 sets
	Tinting powder(vial) /liquid (200ml) (1:25)	1 per color	Tinting powder(vial) /liquid (200ml) (1:25)	1 per color
	Set of frames (full, semi-rimless, rimless): metal and plastic (1:1)	25 sets	Set of frames (full, semi-rimless, rimless): metal and plastic (1:1)	25 sets

	UV powder(vial)/liquid (200ml) (1:25)	1vial/ btl	UV powder(vial)/liquid (200ml) (1:25)	1vial/ btl
	Neutralizer (1:25)	1 btl	Neutralizer (1:25)	1 btl
	Refitting nylon cord (1:25)	1 roll	Refitting nylon cord (1:25)	1 roll
	Frame spare parts (temples, temple tips, bridge, nose pads, screws)	14 packs	Frame spare parts (temples, temple tips, bridge, nose pads, screws)	14 packs
	Lens pattern (1:1)	25 pcs	Lens pattern (1:1)	25 pcs
	Edging pad (1:1)	25 pcs	Edging pad (1:1)	25 pcs
	Fixtures		**Fixtures**	
	Description	**Qty**	**Description**	**Qty**
	Work table	5 pcs	Work table	5 pcs
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**
	Frame Catalog	1	Frame Catalog	1 pc
	Lens Catalog	1	Lens Catalog	1 pc
	Magazines	1	Magazines	1 pc
	Textbooks		Textbooks	

II. B - TRAINING FACILITIES (TF)

HUMAN HEALTH/HEALTH CARE SECTOR	
Qualification :	OPHTHALMIC LENS SERVICES NC II

Existing

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/trainees

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Student/Trainee Working Space	1 x 1 m.	1 sq. m.	25 sq. m
Lecture/Demo Room	8 x 5 m.	40 sq. m.	40 sq. m.
Learning Resource Center	3 x 5 m.	15 sq. m.	15 sq. m.
Wash/ Comfort Room		10 sq. m.	10 sq. m.
Facilities/ Equipment/ Circulation Area	30% (A+B+C+D)		27 sq. m.
		Total :	117 sq. m.

Amended

No Amendments

II. C – TRAINER'S QUALIFICATION (TQ)

HUMAN HEALTH/HEALTH CARE SECTOR	
Qualification:	**OPHTHALMIC LENS SERVICES NC II**
Existing	**Amended**
▪ Must be a holder of Ophthalmic Lens Services NC II or its equivalent ▪ MUST have undergone training on Training Methodology II (TM II) ▪ MUST be able to communicate effectively both orally and in written form Must possess good communication skills ▪ MUST be physically, emotionally, psychologically and mentally fit ▪ MUST have at least two (2) years experience in the industry for the last five (5) years ▪ MUST possess good moral character	▪ Must be a holder of National TVET Trainer Certificate (NTTC) Level I in Ophthalmic Lens Services NC II; ▪ Must possess good communication skills; and ▪ Must have at least two (2) years' experience in the industry for the last five (5) years

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
2D GAME ART DEVELOPMENT NC III	**Description**	**Qty**	**Description**	**Qty**
	Electronic pen and tablet	15	Electronic pen and tablet	15 pcs
	Mouse	15	Mouse	15 pcs
	Eraser	15	Whiteboard Eraser	3 pcs
	Internet access/ LAN connected	1	Internet access/ LAN connected minimum 5mbps	1 lot
	Computer Application e.g. - Flash - ToonBoom - After Effects - Adobe Photoshop CS5+	15 licenses per application	Computer Application e.g. - Flash - ToonBoom - After Effects - Adobe Photoshop CS5+ PLUS any other up-to-date 2D game art software applications	5 licenses per application
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Ergonomic computer tables and chairs	15	Computer tables and chairs	15 pcs
	Scanner	2	Scanner (may be 3 in 1 scanner with inkjet printer)	2 units
	LCD Projector	1	LCD Projector	1 unit
	Ink-jet Printer	1	Ink-jet Printer	1 unit
	LCD Monitor/TV, 42 inches	1	LCD Monitor/TV, 42 inches	1 unit
	Computer (with peripherals) Windows PC or Mac - 19in. LCD monitor, - multi-core 2GHz CPU, - Direct X10, open GL capable video card, - 4GB memory, - 500 GB hard disk	15	Computer or Laptop (with peripherals) Windows PC or Mac Computer specs* - 19in. LCD monitor, - i3-6th gen or equivalent - 2 GB Video Card, open GL capable - 8 GB memory, - 500 GB hard disk - 256 GB SSD *or higher **OR** Computer set or Laptop (*Software dependent specifications)*	15 units

	White board and / or glass board	2	White board and / or glass board with whiteboard marker	2 units
			Headphone with Mic	15 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Mock theme and script	15	Mock theme and script	15 pcs
	Pen and paper	15	Pen and paper	15 pcs
	Learning elements	15	Learning elements	15 pcs
	Printable storyboard	15	Printable storyboard	15 pcs
	Hand-outs	15	Hand-outs	15 pcs
	Practice materials	15	Practice materials	15 pcs
	Reference books	15	Reference books	15 pcs
	Learning materials/ guide	15	Learning materials/ guide	15 pcs

II. B - TRAINING FACILITIES (TF)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification :	**2D GAME ART DEVELOPMENT NC III**

Existing

3.5 TRAINING FACILITIES

Based on class size of 15 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
Computer Lab	5x10	50	1	60
Learning Resource Area	4 x 5	20	1	20
Wash ,Toilet & Locker Room	2 x 5	10	2	20
Total				80
Facilities / Equipment / Circulation**				30
Total Area				**110**

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

Appropriate consideration should be given in providing and allocating work space, communications facilities, and the usual workplace amenities to ensure a

Amended

3.5 TRAINING FACILITIES

Based on class size of 15 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
Computer Lab	3 x 5	50	1	50
Learning Resource Area	2 x 2	20	1	20
Wash, Toilet & Locker Room	2 x 5	10	2	20
Total				130
Facilities / Equipment / Circulation**				30
Total Area				**160**

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

Appropriate consideration should be given in providing and allocating workspace, communications facilities, and the usual workplace amenities to ensure a proper learning environment. Where applicable, training shall be held or conducted in learning facilities in accordance with generally accepted industry standards and practice.

II. C – TRAINER'S QUALIFICATION (TQ)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification:	**2D GAME ART DEVELOPMENT NC III**
Existing	**Amended**
● Holder of National TVET Trainer's Certificate (NTTC) Level 1 ● * Must have at least 2-years relevant industry experience. ● Must be physically & mentally fit. * Optional: Only when required by the hiring institution.	● Must be a holder of National TVET Trainer's Certificate (NTTC) Level I in 2D Game Art Development NC III; and ● Must have at least 2-years relevant industry experience in the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
3D GAME ART DEVELOPMENT NC III	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Electronic pen and tablet	15	Electronic pen and tablet	15 pcs
	Mouse	15	Mouse	15 pcs
	Eraser	15	Whiteboard Eraser	3 pcs
	Internet access/ LAN connected	1	Internet access/ LAN connected minimum 5mbps	1 lot
	Computer Application e.g. - Maya - 3D Studio Max - Softimage - Lightwave - Maxxon - Blender	15 licenses per software	Computer Application e.g. - Maya - 3D Studio Max - Softimage - Lightwave - Maxxon - Blender PLUS any other up-to-date 3D game art software applications	5 licenses per application
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Ergonomic computer tables and chairs	15	Computer tables and chairs	15 pcs
	Scanner	2	Scanner (may be 3 in 1 scanner with inkjet printer)	2 units
	LCD Projector	1	LCD Projector	1 unit
	Ink-jet Printer	1	Ink-jet Printer	1 unit
	LCD Monitor/TV, 42 inches	1	LCD Monitor/TV, 42 inches	1 unit
	Computer (with peripherals) Windows PC or Mac - 19in. LCD monitor, - multi-core 2GHz CPU, - Direct X10, open GL capable video card, - 4GB memory, - 500 GB hard disk	15	Computer (with peripherals) or Laptop Windows PC or Mac Computer specs* - 19in. LCD monitor, - i3-6th gen or equivalent - 2 GB Video Card, open GL capable - 8 GB memory, - 500 GB hard disk - 256 GB SSD *or higher **OR**	15 units

			Computer set or Laptop (*Software dependent specifications)*	
	White board and / or glass board	2	White board and / or glass board with whiteboard marker	2 units
			Headphone with mic	15 pcs
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Mock theme and script	15	Mock theme and script	15 pcs
	Pen and paper	15	Pen and paper	15 pcs
	Learning elements	15	Learning elements	15 pcs
	Printable storyboard	15	Printable storyboard	15 pcs
	Hand-outs	15	Hand-outs	15 pcs
	Practice materials	15	Practice materials	15 pcs
	Reference books	15	Reference books	15 pcs
	Learning materials/ guide	15	Learning materials/ guide	15 pcs

II. B - TRAINING FACILITIES (TF)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification :	**3D GAME ART DEVELOPMENT NC III**

Existing

3.5 TRAINING FACILITIES

Based on class size of 15 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
Computer Lab	5x10	50	1	60
Learning Resource Area	4 x 5	20	1	20
Wash ,Toilet & Locker Room	2 x 5	10	2	20
Total				80
Facilities / Equipment / Circulation**				30
Total Area				**110**

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

Appropriate consideration should be given in providing and allocating work space, communications facilities, and the usual workplace amenities to ensure a

Amended

3.5 TRAINING FACILITIES

Based on class size of 15 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
Computer Lab	3 x 5	50	1	50
Learning Resource Area	2 x 2	20	1	20
Wash, Toilet & Locker Room	2 x 5	10	2	20
Total				130
Facilities / Equipment / Circulation**				30
Total Area				**160**

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

Appropriate consideration should be given in providing and allocating workspace, communications facilities, and the usual workplace amenities to ensure a proper learning environment. Where applicable, training shall be held or conducted in learning facilities in accordance with generally accepted industry standards and practice.

II. C – TRAINER'S QUALIFICATION (TQ)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification:	**3D GAME ART DEVELOPMENT NC III**
Existing	**Amended**
● Holder of National TVET Trainer's Certificate (NTTC) Level 1 ● * Must have at least 2-years relevant industry experience. ● Must be physically & mentally fit. * Optional: Only when required by the hiring institution.	● Must be a holder of National TVET Trainer's Certificate (NTTC) Level 1 in 3D Game Art Development NC III; and ● Must have at least 2-years relevant industry experience in the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
GAME PROGRAMMING NC III	**Tools/Instrument**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Computer Application Require at least 2 - Visual Studio .NET Professional - Flash - Eclipse - Unity 3D - Game engines	10 licenses	Computer Application Require at least 2 - Visual Studio .NET Professional - Flash - Eclipse - Unity 3D - Game engines PLUS any other up-to-date game programming software applications	10 licenses
	Graphics Library e.g. - DirectX	10 licenses	Graphics Library	10 licenses
	Internet access , 2Mbps	1	Internet access, 20 Mbps	1 lot
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Computer (with peripherals) Windows PC or Mac - 17in. LCD monitor, - multi-core 2GHz CPU, - Direct X10 capable video card, - 4GB memory, - 500 GB hard disk	10	Computer (with peripherals) or Laptop Windows PC or Mac Computer specs* - 19in. LCD monitor, - i3-6th gen or equivalent - 2 GB Video Card, open GL capable - 8 GB memory, - 500 GB hard disk - 256 GB SSD *or higher **OR** Computer set or Laptop (*Software dependent specifications)*	15 units
	Ergonomic computer tables and chairs	10	computer tables and chairs	15 pcs
	LCD Projector	1	LCD Projector	1 unit
	Ink-jet Printer	1	Ink-jet Printer	1 unit
	White board and / or glass board	2	White board and / or glass board	2 units

	Materials		Materials	
	Description	**Qty**	**Description**	**Qty**
	Hand-outs	10	Hand-outs	10 pcs
	Learning materials/guide	10	Learning materials/guide	10 pcs
	Practice materials	10	Practice materials	10 pcs
	Reference books	10	Reference books	10 pcs

II. B - TRAINING FACILITIES (TF)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification :	**GAME PROGRAMMING NC III**

Existing

3.5 TRAINING FACILITIES

Based on class size of 10 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 (optional)	5 x 8	40	1	40
Computer/Laboratory Area	6 x 8	48	1	48
Learning Resource Area	4 x 5	20	1	20
Wash ,Toilet & Locker Room	2 x 5	10	2	20
Sub-Total				**128**
Facilities/Equipment/Circulation**				38
Total Area				**166**

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

Amended

3.5 TRAINING FACILITIES

Based on class size of 10 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 (optional)	5 x 8	40	1	40
Computer/Laboratory Area	6 x 8	48	1	48
Learning Resource Area	4 x 5	20	1	20
Wash ,Toilet & Locker Room	2 x 5	10	2	20
Sub-Total				**128**
Facilities/Equipment/Circulation**				38
Total Area				**166**

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

(Disinfecting area/Portable hand wash area if possible)

II. C – TRAINER'S QUALIFICATION (TQ)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification:	**GAME PROGRAMMING NC III**
Existing	**Amended**
● Holder of National TVET Trainer's Certificate (NTTC) Level 1 ● * Must have at least 2-years relevant industry experience. ● Must be physically & mentally fit. * Optional: Only when required by the hiring institution.	● Holder of National TVET Trainer's Certificate (NTTC) Level 1 in Game Programming NC III; and ● Must have at least 2-years relevant industry experience in the game development industry for the last 5 years.

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
MEDICAL CODING AND CLAIMS PROCESSING NC III	**Equipment**		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Computers with internet (optional)	At least 2 sets	Computer set or laptop (Software dependent specifications)	At least 2 sets
			Internet Access, 2mbps	1 lot
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Coding Manuals (*latest edition or at least 2-years of publication*) • Coding Resources Diagnosis code set • Procedures/Services and Supplies code set	At least 5 sets	Coding Manuals (*latest edition or at least 2-years of publication*) • Coding Resources Diagnosis code set • Procedures/Services and Supplies code set Level I and II	At least 5 sets
	Claims Processing Manuals / Handouts	At least 5 sets	Claims Processing Manuals / Handouts	At least 5 sets
	Training/Student manual (optional)	1:01	Training/Student manual (optional)	1:01
	Latest Medical Dictionary	At least 2 pcs	Latest Medical Dictionary	At least 2 pcs

II. B - TRAINING FACILITIES (TF)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification :	**MEDICAL CODING AND CLAIMS PROCESSING NC III**

Existing

3.5 TRAINING FACILITIES

The building must be in compliance with occupational health and safety guidelines. 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 /Laboratory Room*	8 x 5	40	1	40
Learning Resource Area / Repository of references/ manuals, etc. *(may be located inside the lecture / laboratory room)*	4 X 5	20	1	20
Wash ,Toilet & Locker Room	1 x 2	2	2	4
Total				64
Facilities / Equipment / Circulation**				19
Total Area				**83**

Note: *Maximum required ratio of trainer to students = 1: 25*

** The above specification for the lecture room space requirement assumes a maximum of 25 students. The area size may vary depending on the number of students at a given class.*

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

Amended

3.5 TRAINING FACILITIES

The building must be in compliance with occupational health and safety guidelines. 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 /Laboratory Room*	8 x 5	40	1	40
Learning Resource Area / Repository of references/ manuals, etc. *(may be located inside the lecture / laboratory room)*	4 X 5	20	1	20
Wash ,Toilet & Locker Room	1 x 2	2	2	4
Total				64
Facilities / Equipment / Circulation**				19
Total Area				**83**

Note: *Maximum required ratio of trainer to students = 1: 25*

** The above specification for the lecture room space requirement assumes a maximum of 25 students. The area size may vary depending on the number of students at a given class.*

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

(Disinfecting area/Portable hand wash area if possible)

II. C – TRAINER'S QUALIFICATION (TQ)

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR	
Qualification:	**MEDICAL CODING AND CLAIMS PROCESSING NC III**

Existing	Amended
● Must be a holder of National TVET Trainer's Certificate (NTTC) I ○ Must be a holder of Medical Coding and Claims Processing NC III ○ Must have completed training and passed the assessment for Trainer's Methodology course ● With at least two (2) years of relevant industry experience as medical coding and claims specialist or with international certification in medical coding, billing and/or claims	No Amendments

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

LOGISTICS SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
WAREHOUSING SERVICES NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Screw driver, negative	5 pcs.	Screw driver, negative**	5 pcs.
	Screw driver, positive (Philips)	5 pcs.	Screw driver, positive (Philips)**	5 pcs.
	Adjustable wrench	1 pcs.	Adjustable wrench**	1 pc
	Set of combination wrench	1 set.	Set of combination wrench**	1 set.
	Set of socket wrench, 3/8” drive	1 set	Set of socket wrench, 3/8” drive**	1 set
	Set of socket wrench, ½ ” drive	1 set	Set of socket wrench, ½ ” drive**	1 set
	Hex (Allen) wrench set	1 set	Hex (Allen) wrench set**	1 set
	Crow (pry) bar, straight head, 16”	1 pcs.	Crow (pry) bar, straight head, 16” **	1 pc
	Crow (pry) bar, rolling head, 16”	1 pcs.	Crow (pry) bar, rolling head, 16” **	1 pc
	Pliers, slip joint, 6”	5 pcs.	Pliers, slip joint, 6” **	5 pcs.
	Vise grip pliers, slip joint, 10”	5 pcs.	Vise grip pliers, slip joint, 10” **	5 pcs.
	Punch and Chisel Set	1 set	Punch and Chisel Set**	1 set
	Cutting Knife (Cutter)	5 pcs.	Cutting Knife (Cutter) **	5 pcs.
	Packaging tape dispenser	2 pcs.	Packaging tape dispenser**	2 pcs.
	Anti-fatigue mat	1 pc.	Anti-fatigue mat**	1 pc.
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Pallet truck. 2 tons cap. *	1 unit	Pallet truck. 2 tons cap. **	1 unit
	Trans-Stacker / Transporter, 23x41x72" dimension, 3/4–56” lift height*	1 unit	Trans-Stacker / Transporter, 23x41x72" dimension, 3/4–56” lift height **	1 unit
	Hand truck, platform type, 200 kg. cap. *	1 unit	Hand truck, platform type, 200 kg. cap. **	1 unit
	Drum truck trolley, 1520 x 600 x 1500mm, 450Kg cap. *	1 unit	Drum truck trolley, 1520 x 600 x 1500mm, 450Kg cap. **	1 unit
	Scale, weighing	1 unit	Scale, weighing **	1 unit
	Hand hoist (chain block), 2 ton capacity *	1 unit	Hand hoist (chain block), 2 ton capacity **	1 unit
	Jib crane, mobile, 1000 lbs.@54"L, 9–96-3/4" *	1 unit	Jib crane, mobile, 1000 lbs.@54"L, 9–96-3/4" **	1 unit
	Dolly, plastic or wood, 250kg cap.	1 unit	Dolly, plastic or wood, 250kg cap. **	1 unit
	Trolley, platform type with handle,710 x 455mm. 150kg cap.	1 unit	Manual hand pallet jack for ECR pallet	1 unit
	Pallet, wood, 80x48x4-7/8"	2 units	ECR Standard Pallet 1200x1000x156 mm	2 units
	Pallet, wood, 48x40x4-7/8"	2 units	Pallet, wood, 48x40x4-7/8" **	2 units

	Pallets, Double-Deck Plastic 48x40x6"	2 units	Pallets, Double-Deck Plastic 48x40x6" **	2 units
	Shelving unit, steel,36 x 30 x 85", 2-layer shelves *	2 unit	Shelving unit, steel,36 x 30 x 85", 2-layer shelves **	2 unit
	Work bench, Steel top, industrial, 34 x 72" D x W, Std. 32-1/2" H *	4 units	Work bench, Steel top, industrial, 34 x 72" D x W, Std. 32-1/2" H **	4 units
	Forklift truck, battery operated, 1 ton cap. *	1 unit	Forklift truck, battery operated, 1 ton cap. **	1 unit
	Step ladder, double sided, aluminum	1 unit	Step ladder, double sided, aluminum **	1 unit
	Bar code scanner, long range, laser type, up to 30” range	1 unit	Bar code scanner, long range, laser type, up to 30” range**	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Packaging box, cardboard, 20” x 10” x 10”	10 pcs.	Packaging box, cardboard, 20” x 10” x 10” **	10 pcs.
	Packaging box, cardboard, 20” x 20” x 20”	10 pcs.	Packaging box, cardboard, 20” x 20” x 20” **	10 pcs.
	Bubble cushioning, 1/2" x 250` Slit 12" Perf 12" Large Bubble	1 bundle	Bubble cushioning, 1/2" x 250` Slit 12" Perf 12" Large Bubble**	1 bundle
	Loose fill peanuts, white, 2 ½ cu. Ft. bag size	1 bag	Loose fill peanuts, white, 2 ½ cu. Ft. bag size**	1 bag
	Stretch wrap, 5” x 100- ft. roll	1 roll	Stretch wrap, 5” x 100- ft. roll	1 roll
	Packaging tape, transparent, 2” x 110 yards, roll	2 rolls	Packaging tape, transparent, 2” x 110 yards, roll	2 rolls
	Packaging tape, reinforced paper, 2.75" x 450' roll	2 rolls	Packaging tape, reinforced paper, 2.75" x 450' roll**	2 rolls
	Packaging Tape, General Purpose Grade, 2 in. x 110 yds. (Clear)	2 rolls	Packaging Tape, General Purpose Grade, 2 in. x 110 yds. (Clear) **	2 rolls
	Oil, hydraulic, SAE 10	1 gallon	Oil, hydraulic, SAE 10**	1 gallon
	Grease, multi-purpose,	1 can	Grease, multi-purpose **	1 can
	Pen, permanent, black	1 box	Pen, permanent, black	5 pcs
			Barcode label and stickers	5 pcs
			Sample of Quality Assurance tags and labels	5 pcs
			Dummy of Supplier’s Delivery Invoice, Customer Delivery Invoice, Pick-list Invoice	5 pcs
			Sample Inventory Count Sheet	5 pcs
			Sample of product shippers and stock keeping units	5 pcs
	Safety/PPEs		**Safety/PPEs**	
	Description	**Qty**	**Description**	**Qty**
	Cotton gloves	25 pairs	Cotton gloves	25 pairs
	Leather gloves	25 pairs	Leather gloves	25 pairs
	Reflectorized Vest	25 pcs.	Reflectorized Vest	25 pcs.

	Safety glass	25 pcs.	Safety glass	25 pcs.
	Safety shoes. Steel toed	25 pcs.	Safety shoes. Steel toed	25 pcs.
	Dust Mask	25 pcs.	Dust Mask	25 pcs.
	Hard Hat	10 pcs	Hard Hat	25 pcs
	Apron	25 pcs.	Apron	25 pcs.
			Fire extinguisher for demo purposes	1 unit
			Face shield*	25 pcs
			N95 Face Mask*	25 pcs
	Room Furnitures		**Room Furnitures**	
	Description	**Qty**	**Description**	**Qty**
	Arm chair, plastic, 17 ½" seat height	25 units	Arm chair, plastic, 17 ½" seat height	25 units
	Table teachers, single pedestal, 48" W x 30" D x 29-1/2" H	1 unit	Table teachers, single pedestal, 48" W x 30" D x 29-1/2" H	1 unit
	Projector, overhead	1 unit	LCD Projector	1 unit
	Computer System	1 unit	Computer System	1 unit
	White board, magnetic, wall mounted. 4 ft. x 8 ft.	1 unit	White board, magnetic, wall mounted. 4 ft. x 8 ft.	1 unit
	Flip board, foldable	1 set	Flip board, foldable	1 set
	Cork Board	1 pc	Cork Board	1 pc

*To be brought by the candidate, if necessary, per current health protocols of the government.

Note: A Training Center is REQUIRED to partner with an existing warehouse operator for demo purposes of the tools and equipment in warehousing operations.

**Should be available in partner company

II. B - TRAINING FACILITIES (TF)

LOGISTICS SECTOR	
Qualification :	WAREHOUSING SERVICES NC II

Existing	Amended
3.5 TRAINING FACILITIES The areas indicated here are indicative for a class size of 25 trainees. For a smaller class size, they may be reduced, provided that there should be at least 1.0 sq. m. or more space per trainee.	No Amendments

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Lecture Room	8 x 5 m.	40 sq. m.	40 sq. m.
Laboratory/workshop *	Actual Size	Actual Size	Actual Size
Learning Resource Center	3 x 5 m.	15 sq. m.	15 sq. m.
Storage/Tool room		20 sq.m	20 sq.m
Wash room/Comfort Room (Male and Female)	3 x 4 m.	12 sq. m.	12 sq. m.
Circulation Area			26 sq. m.
		Total workshop area:	**115 sq. m.**

Note:
* Laboratory Activity can be done in an actual Warehouse Facility
TVIs offering the Warehousing Services Program must have MOA with Warehouse Facility

II. C – TRAINER'S QUALIFICATION (TQ)

LOGISTICS SECTOR		
Qualification:	**WAREHOUSING SERVICES NC II**	
Existing		**Amended**
▪ Must be a holder of NTTC Level I in Warehousing Services NC II ▪ Must be able to communicate in English and Filipino vernacular ▪ Must have at least 2 years relevant warehousing industry experience ▪ Must have attended relevant training and seminars on warehousing operations ▪ Must be computer literate		▪ Must be a holder of National TVET Trainer Certificate (NTTC) Level I in Warehousing Services NC II; ▪ Must be able to communicate in English and Filipino vernacular; ▪ Must have at least 2 years relevant warehousing industry experience; or conducted warehousing trainings for companies if no actual warehousing operations industry experience; ▪ Must have attended relevant training and seminars on warehousing operations; and ▪ Must be computer literate *Note: Trainer can be qualified if he/she has been immersed in warehousing training on quality warehousing, operations and warehouse audit functions*

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
CAD/CAM Operation NC III	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Lathe		**Lathe**	
	Dovetail cutter 60 deg., dia. 16mm	8 pcs.	---	
	NC start drill 10mm dia.	8 pcs.	NC start drill 10mm dia	3 pcs
	Center drill # 2	16 pcs.	Center drill # 2	3 pcs
	Slot cutter dia. 16 mm	8 pcs.	---	
	Letter punch	1 set	---	
	Ball peen hammer, 0.5 kgs	2 pcs.	---	
	Staggered tooth side cutter dia. 36mm x 5mm	8 pcs.	---	
	Face Mill, 16 x 20 x 40mm dia.	8 pcs.	---	
	Drill bit Φ1mm-to13mm at 0 .5 increment set	6 boxes	---	
	Engraving Tool	8 sets	---	
	Flat File, 2nd cut, 150 mm	8 pcs.	---	
	End Mill 4, 6, 8, 10, 12, 16 mm dia	32 pcs.	---	
	Hand Tap M6, M8, M10, M12	3 sets	---	
	Machine tap M3-M6, M8, M10 set	8 pcs. each	---	
	Needle File	8 sets	---	
	Rubber mallet	8 pcs.	Rubber mallet	1 pc
	Milling		**Milling**	
	Staggered tooth side cutter dia. 36mm x 5mm	8 pcs.	Staggered tooth side cutter dia. 36mm x 5mm	2 pcs
	Face Mill, 40, 50, 63 mm dia.	3 pcs. each	Face Mill 40 mm dia. only	1 set
	Dovetail cutter, 16 mm dia.	8 pcs.	Dovetail cutter, 16 mm dia.	1 pc
	Center drill # 2	16 pcs.	Center drill # 2	3 pcs
	Edge finder	8 pcs.	Edge finder	1 pc
	Rubber mallet	8 pcs.	PU Soft Mallet	1 pc
	End Mill 4, 6, 8, 10, 12, 16 mm dia	32 pcs.	End mill 4, 8, 12 mm dia	3 pcs each
	Hand Tap M6, M8, M10, M12	3 sets	---	
	Drill bit dia.1mm-13mm set	6 boxes	Drill bit dia.1mm-13mm set	1 box
	Slot cutter dia. 16 mm	8 pcs.	Slot cutter dia. 16 mm	3 pcs
	Needle File	2 sets	---	
	Letter punch	1 set	---	

	Ball nose end mill, 3, 6, 8, 10, 12mm	8 pcs. each	8mm ball nose endmill only	2 pcs
	NC start drill 10mm dia.	8 pcs.	---	
	Machine tap M5, M6, M8, M10 , M12	8 pcs. each	M10 only	3 pcs
	Engraving Tool	8 sets	Engraving Tool	1 pc
	Flat File, 2nd cut, 150 mm	8 pcs.	---	
	Ball peen hammer, 0.5 kgs	2 pcs.	---	
	Measuring Instruments		**Measuring Instruments**	
	Description	**Qty**	**Description**	**Qty**
	Vernier caliper (Digital) 150mm	8 pcs.	Vernier caliper (Digital, Water Resistance) 200mm, 0.01 resolution	2 pcs
	Precision Bevel protractor	1 pc.	Precision Bevel protractor	1 pc.
	Vernier height gage with dial indicator (optional)	1 pc.	Vernier height gage with dial indicator (optional)	1 pc.
	Micrometer (Digital) 0- 25 mm	8 pcs.	Micrometer (Digital) 0-25mm	1 pc
	Thread pitch gage	1 pc.	Acme Thread pitch gage	1 pc.
	Depth gage micrometer	8 pcs.	Depth gage micrometer	1 pc
	Dial indicator with magnetic stand, lever-type, 0.01 least count	8 pcs.	Dial indicator with magnetic stand, lever-type, 0.01 least count	2 pcs
	Gage block (optional)	1 set	Gage block (optional)	1 set
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	CNC Lathe	1 unit	CNC Lathe	1 unit
	CNC CAD CAM System, Pentium PC with software	10 units	CNC CAD CAM System, Minimum i5 processor or equivalent PC with 32GB RAM software (license)	10 units
	Power hacksaw	1 unit	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz (optional)	1 unit
	CNC Milling	1 unit	CNC Milling	1 unit
	OHP/LCD Projector	1 unit	---	
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet	1 lot
	Materials		**Materials**	

	Description	Qty	Description	Qty
	Round bar CRS 38mm dia x 150mm	2 pcs.	Round bar CRS 38mm dia x 150mm	2 pcs.
	Aluminum bar 22mm dia x 150mm	2 pcs.	---	
	Aluminum bar 50x50mm x 150mm	2 pcs.	Aluminum bar 50x50mm x 150mm	2 pcs.
	Flat bar 101.6 x 100mm x 300mm	2 pcs.	Mild Steel Plate 300x100x25 mm (LxWxH)	1 pc
	Bond paper sub. 20 A4	10 reams	Bond paper sub. 20 A4	2 reams
	Round bar CRS 25.4mm dia x 150mm	2 pcs.	---	
	Aluminum bar 30mm dia x 150mm	2 pcs.	Aluminum bar 30mm dia x 150mm	2 pcs.
	Aluminum bar 50 x100mm x 150mm	2 pcs.	---	
	Paint brush 2” width	16 pcs.	Paint brush 2” width	4 pcs
	32GB flash drive	10 pcs.	32GB flash drive	10 pcs
	Round Bar CRS 50mm dia. X 150mm	2 pcs.	---	
	Aluminum bar 45mm dia. X 150mm	2 pcs.	---	
	Aluminum bar 120 x120mm x 5m	2 pcs.	---	
			Cutting Oil	1 pail
			Lubricating Oil,	1 pail
	Whiteboard marker Black, Blue and red color	3 boxes	Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set
	Teachers Guide	8 pcs.	---	
	Reference books		Reference books	1 lot
	Modules/ LEs		Modules /CBLM	10 sets
	Manuals	6 pcs.	Manuals	1 set
	Catalogs		---	
	CDs/ Video tapes		---	
	Simulation software	10pcs.	PC Type Simulation Software	Specific to PC Type
	Brochures		---	
	Handouts		---	

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : CAD/CAM OPERATION NC III

Existing

The CNC Machining workshop must be of concrete structure for 10 trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (Permanent)	79M x 25M		1,975 sq. M
• CNC Training System (CNC/CAD/CAM room)	7.5M x 11.0M	82.5 sq.M	82.5 sq.M
• CNC Basic Milling workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Basic Turning workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Intermediate and Production workshop	7.5M x 11.0M	82.5 sq. M	82.5 sq. M
• Quality Control room	10.0M x 11.0M	110 sq. M	110 sq. M
• Learning Resource Center	5.0M x 5.0M	25 sq. M	25 sq. M
• Audio Visual room	5.0M x5.0M	25 sq. M	25 sq. M
• Tool Room and Storage	10.0M x 11.0M	110 sq M	110 sq M
• Metrology room	7.0M x 11.0M	70 sq. M	70 sq. M

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
CNC Training Rm (CNC/ CAD/ CAM Rm)	10M x 5M	50sq.M
CNC Lathe & Milling Workshop	10M x 5M	50sq.M
Learning Resource Center / Audio Visual Room	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 3M	9sq.M
	Total area	**139 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**CAD/CAM OPERATION NC III**
Existing	**Amended**
• Must be a holder of CAD/CAM Operation NC III or equivalent qualification • Must have undergone training on Training Methodology II (TM II) or equivalent in training experience • Must be physically and mentally fit • *Must have at least 2 years relevant job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	● Must be a holder of National TVET Trainer Certificate Level I (NTTC Level I) in CAD/CAM Operation NC III; ● At least technology graduate related to Mechanical Engineering or Mechanical Designing; and ● Must have at least 2 years' industry experience in: CNC CAD/CAM Programming and CNC Machining operations or at least 3 years teaching experience with industry immersion relevant to CAD/CAM Operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
CNC LATHE MACHINE OPERATION NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Carbide inserts for aluminum - finishing - roughing - threading (internal, external) - parting-off - grooving - boring	2 boxes each	---	
	Carbide inserts for Steel - finishing - roughing - threading (internal, external) - parting-off - grooving - boring	2 boxes each	---	
	Tools and tool holders with wrenches (Left- hand, right-hand, neutral)	8 sets	1 pc - Roughing Holder (fit to Shank of CNC machine acquired) 1 pc - Finishing Holder (fit to Shank of CNC machine acquired) 1 pc - External threading holder 1 pc - Internal threading holder 1 set - Blade type with Holder (2 mm Width Parting / grooving tools 1 pc each - Boring tools (Cylindrical Shank 10 and 12mm)	8 sets
	Center drill #2	16 pcs.	Center drill #2	8 pcs
	Rubber mallet	8 pcs.	PU Soft Mallet	8 pcs
	Hand taps - M5 x .75mm - M6 x 1mm - M8 x 1.25 - M10 x 1.5 - M12 x 1.75	2 sets each	---	
	Tap Drill Sizes - 4.25 mm - 5.0 mm - 6.75 mm - 8.5 mm - 10.25 mm	8 pcs. each	---	
	Letter punch	1 set	Letter punch	1 set
	Drill bits 1mm – 12 mm (.5mm increment)	2 sets	Drill bits (HSS with Cobalt) 1mm – 12 mm (.5mm increment)	1 set (required)

	Drill - Ø15 mm - Ø20 mm - Ø25 mm	1 pc. each (optional)	Drill (HSS or Insert type) - Ø15 mm (incl. holder) - Ø20 mm (incl. holder)	1pc. each
			Drill chuck with holder	1 set each
	Ball peen hammer, 0.5 kgs	2 pcs.	Ball peen hammer, 0.5 kgs	2 pcs.
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Vernier caliper (Digital) 150mm	8 pcs.	Vernier caliper (Digital, Water Resistance) 200mm, 0.01 resolution	8 pcs.
	Vernier height gage with dial indicator (optional)	1 pc.	Vernier height gage (300mm) with dial indicator, 0.01 resolution	1 pc.
	Gage block (optional)	1 set	Gage block (optional)	1 set
	Micrometer (Digital) 0- 25 mm	8 pcs.	Micrometer (Digital) 0- 25 mm	8 pcs.
	Bevel protractor	1 pc.	Bevel protractor	1 pc.
	Dial indicator with magnetic stand, lever-type, 0.01 least count	8 pcs.	Dial indicator with magnetic stand, lever-type, 0.01 least count/resolution	8 pcs.
	Thread pitch gage	1 pc.	Thread pitch gage (standard V-thread)	1 pc.
			Tool eye	2 units
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	2-axis CNC Lathe Machine with complete standard accessories	8 units	2-axis CNC Lathe Machine (G codes /M codes) with complete standard accessories, single turret-8 tools, at least 4000 rpm, 150mm chuck, 400mm between center, 220 v, three phase, 60 hz, Fanuc control or equivalent	4 units
			Computer Workstation (As per minimum requirement of design and manufacturing software, CAD/CAM ready)	10 units
	Power Hack saw	1 unit	Power Hack saw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
			Two Head Bench Grinder 0.5 hp	1 unit
			Combination Drill bit &end mill grinder (optional)	1 unit
			Heavy Duty Work bench	1 unit
			Bench Vise, (Opening 150mm)	2 units
	OHP/LCD Projector	1 unit	---	
			Air-Conditioning unit, 2HP	2 units

			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet good for at least 25 students	1 lot
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
			Carbide inserts for CRS ○ finishing ○ roughing ○ threading (external) ○ threading (internal) ○ parting-off ○ grooving (Blade Type 2mm Width) ○ boring (diameter 10)	20 pcs each
			Carbide inserts for TS4140 ○ finishing ○ roughing ○ threading (external) ○ threading (internal) ○ parting-off ○ grooving (Blade Type 2mm Width) ○ boring (diameter 10, 12)	20 pcs each
	Round Bar CRS 50mm dia. X 6m	2 pcs.	Round Bar TS4140 50mm dia. X 6m	1 pc
	Aluminum bar 45mm dia. X 5m,T6	2 pcs.	Round bar CRS 45mm dia. X 6m	1 pc
	256 mb flash drive	16 pcs.	8GB flash drive	17 pcs.
	Rags	10 kgs.	Rags	10 kgs.
	Round bar CRS 38mm dia x 6m	2 pcs.	Round bar TS4140 38mm dia x 6m	1 pc
	Aluminum bar 22mm dia x 5m, T6	2 pcs.	Round bar CRS 22mm dia x 6m	1 pc
	Paint brush 2” width	16 pcs.	Paint brush 2” width	8 pcs
	Round bar CRS 25.4mm dia x 6m	2 pcs.	Round bar TS4140 25mm dia x 6m	1 pc
	Aluminum bar 30mm dia x 5m, T6	2 pcs.	Round bar CRS 32mm dia x 6m	1 pc
			Cutting Oil	1 pail
			Lubricating Oil	1 pail
			Power Hack saw blade	2 pcs
	Whiteboard marker Black, Blue and red color	1 box	Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set
	Teachers Guide	8 pcs.	---	

	Reference books		Reference books	1 lot
	Modules/ LEs		Modules /CBLM	10 sets
	Manuals	6 pcs.	Manuals	1 set
	Catalogs		---	
	CDs/ Video tapes		Audio Visual Training Modules	1 set
	CNC simulation software	16pcs.	CNC simulation software (Must same control panel of the CNC)	4 pcs
	Brochures		---	
	Handouts		---	

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : CNC LATHE MACHINE OPERATION NC II

Existing

The CNC Machining workshop must be of concrete structure for 16 trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (Permanent)	79M x 25M		1,975 sq. M
• CNC Basic Turning workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Intermediate and Production workshop	7.5M x 11.0M	82.5 sq. M	82.5 sq. M
• Quality Control room	10.0M x 11.0M	110 sq. M	110 sq. M
• Learning Resource Center	5.0M x 5.0M	25 sq. M	25 sq. M
• Audio Visual room	5.0M x5.0M	25 sq. M	25 sq. M
• Tool Room and Storage	10.0M x 11.0M	110 sq M	110 sq M
• Metrology room	7.0M x 11.0M	70 sq. M	70 sq. M

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
CNC Training Rm (CNC/ CAD/ CAM Rm)	10M x 5M	50sq.M
CNC Lathe Workshop	10M x 7M	70sq.M
Learning Resource Center / Audio Visual Room	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M
Metrology room	3M x 3M	9sq.M
	Total area	**174 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**CNC LATHE MACHINE OPERATION NC II**
Existing	**Amended**
• Must be a holder of CNC Lathe Machine Operation NC III or equivalent qualification. • Must have undergone training on Training Methodology II (TM II) or equivalent in training/experience • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	● Must be a holder of National TVET Trainer Certificate Level I (NTTC Level I) in CNC Lathe Machine Operation NC II; ● At least technology graduate related to Mechanical Engineering or Mechanical Designing; and ● Must have at least 2 years' industry experience in: CNC Machining operations or at least 3 years teaching experience with industry immersion relevant to CNC lathe machine operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
CNC LATHE MACHINE OPERATION NC III	Dovetail cutter 60 deg., dia. 16mm	8 pcs.	Dovetail cutter 60 deg., dia. 16mm (T-Slot)	2 pcs
	NC start drill 10mm dia.	8 pcs.	---	
	Center drill # 2	16 pcs.	Center drill # 2	2 pcs
	Slot cutter dia. 16 mm	8 pcs.	T-Slot cutter dia. 16 mm	2 pcs
	Letter punch	1 set	Letter punch	1 set
	Ball peen hammer, 0.5 kgs	2 pcs.	Ball peen hammer, 0.5 kgs	2 pcs.
	Staggered tooth side cutter dia. 36mm x 5mm	8 pcs.	---	
	Face Mill, 16 x 20 x 40mm dia.	8 pcs.	Face Mill, 40mm dia.	1 pc
	Drill bit Φ1mm-to13mm at 0.5 increment set	6 boxes	Drill bit Φ1mm-to13mm at 0.5 increment set	1 set
	Engraving Tool	8 sets	Engraving Tool (end mill)	1 set
	Flat File, 2nd cut, 150 mm	8 pcs.	---	
	End Mill 4, 6, 8, 10, 12,16 mm	32 pcs.	End Mill (2 flute) 4, 6, 8, 10, 12mm dia	2 sets
			Collet chuck with collet (4, 6, 8, 10, 12mm dia)	2 sets
			Ball nose (2 flute) 4, 6, 8, 10, 12 dia	1 set
			1 pc - Roughing Holder (fit to Shank of CNC machine acquired)	1 set
			1 pc - Finishing Holder (fit to Shank of CNC machine acquired)	1 set
			1 pc - External threading holder	1 set
			1 pc - Internal threading holder	1 set
			1 set - Blade type with Holder (2 mm Width Parting / grooving tools	1 set
			1 pc each - Boring tools (Cylindrical Shank 10 and 12mm)	1 set
			Engraving Tool (end mill)	1 set
			Edge finder 10 mm dia (ball)	1 set
	Hand Tap M6, M8, M10, M12	3 sets	---	
	Machine tap M3-M6, M8, M10 set	8 pcs. each	Machine tap M6, M8, M10	1 pc
	Needle File	8 sets	---	
	Rubber mallet	8 pcs.	PU Soft Mallet	1 pc
			Oiler	1 pc

			Grease Gun	1 pc
	Vernier caliper (Digital) 150mm	8 pcs.	Vernier caliper (Digital, Water Resistance) 200mm, 0.01 resolution	1 pc
	Precision Bevel protractor	1 pc.	Precision Bevel protractor	1 pc
	Depth gage micrometer	8 pcs.	Depth gage micrometer	1 pc
	Micrometer (Digital) 0- 25 mm	8 pcs.	Micrometer (Digital)	1 pc
	Gage block (optional)	1 set	Gage block (optional)	1 set
	Dial indicator with magnetic stand, lever-type, 0.01 least count	8 pcs.	Dial indicator with magnetic stand, lever-type, 0.01 least count	1 pc
	Vernier height gage with dial indicator (optional)	1 pc.	Vernier height gage with dial indicator (optional)	1 pc.
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Multiple-axis CNC Lathe Machine with complete standard accessories	8 units	Multiple-axis CNC Lathe Machine with complete standard accessories, single turret- 8 tools, at least 4000 rpm, 150mm chuck, 400mm between center, 220 v, three phase, 60 hz, Fanuc control or equivalent	1 unit
			Computer Workstation (As per minimum requirement of design and manufacturing software, CAD/CAM ready)	10 units
	Power Hack saw	1 unit	Power Hack saw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
	Overhead/LCD Projector	1 unit	---	
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet good for at least 25 students	1 lot
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	256 mb flash drive	16 pcs.	16GB flash drive	1 pc
	Whiteboard marker Black, Blue and red color	3 boxes	Whiteboard marker Black, Blue and red color refillable type with eraser	1 box each
	Round Bar CRS 63.5mm dia. X 6m	2 pcs.	Round Bar TS4140 63.5mm	1 pc

			dia. X 3m	
	Paint brush 50 mm width	16 pcs.	Paint brush 50 mm width	2 pcs
	Aluminum bar 45mm dia. X 5m, T6	2 pcs.	Round Bar SUS 304 45mm dia. X 3M	1 pc
	Rags	10 kgs.	Rags	10 kgs.
	Teachers Guide	8 pcs.	---	
	WIN NC software	16 pcs.	License CAD/CAM Software	4 sets
	Catalogs		---	
	Modules/ LEs		Modules /CBLM	10 sets
	Handouts		---	
	Manuals	6 pcs.	Manuals	1 set
	Reference books		Reference books	1 lot
	Brochures		---	
	CDs/ Video tapes		---	
			Carbide inserts for TS4140 - finishing - roughing - threading (external) - threading (internal) - parting-off - grooving (Blade Type 2mm Width) - boring (diameter 10)	1 box each
			Carbide inserts for CRS - finishing - roughing - threading (external) - threading (internal) - parting-off - grooving (Blade Type 2mm Width) - boring (diameter 10, 12)	1 box each
			Cutting Oil	1 pail
			Lubricating Oil	1 pail
	Round bar CRS 38mm dia x 6m	2 pcs.	Round bar TS 4140 38mm dia x 6m	1 pc
	Aluminum bar 22mm dia x 5m, T6	2 pcs.	Round bar CRS 22mm dia x 6M	1 pc
	Round bar CRS 25.4mm dia x 6m	2 pcs.	Round bar TS4140 25.4mm dia x 6m	1 pc
	Aluminum bar 30mm dia x 5m, T6	2 pcs.	Round bar CRS 32mm dia x 6M	1 pc

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : CNC LATHE MACHINE OPERATION NC III

Existing

The CNC Machining workshop must be of concrete structure for 16 trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (Permanent)	79M x 25M		1,975 sq. M
• CNC Basic Turning workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Intermediate and Production workshop	7.5M x 11.0M	82.5 sq. M	82.5 sq. M
• Quality Control room	10.0M x 11.0M	110 sq. M	110 sq. M
• Learning Resource Center	5.0M x 5.0M	25 sq. M	25 sq. M
• Audio Visual room	5.0M x5.0M	25 sq. M	25 sq. M
• Tool Room and Storage	10.0M x 11.0M	110 sq M	110 sq M
• Metrology room	7.0M x 11.0M	70 sq. M	70 sq. M

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
CNC Training Rm (CNC/ CAD/ CAM Rm)	10M x 5M	50sq.M
CNC Lathe Workshop	10M x 7M	70sq.M
Learning Resource Center / Audio Visual Room	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M
Metrology room	3M x 3M	9sq.M
	Total area	**174 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**CNC LATHE MACHINE OPERATION NC III**
Existing	**Amended**
• Must be a holder of CNC Lathe Machine Operation NC III Qualification or its equivalent • Must have undergone training on Training Methodology II (TM II) or equivalent in training experience • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	● Must be a holder of National TVET Trainer Certificate Level I (NTTC Level I) in CNC Lathe Machine Operation NC III; ● At least technology graduate related to Mechanical Engineering or Mechanical Designing; and ● Must have at least 2 years' industry experience in: CNC Machining operations or at least 3 years teaching experience with industry immersion relevant to CNC lathe machine operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
CNC MILLING MACHINE OPERATION NC II	Staggered tooth side cutter dia. 36mm x 5mm	8 pcs.	---	
	Hand Tap M6, M8, M10, M12	3 sets	---	
	Machine tap M3-M6, M8, M10 set	8 pcs. each	Machine tap M6, M8, M10 set	4 pcs
	Engraving Tool	8 sets	---	
	Flat File, 2nd cut, 150 mm	8 pcs.	---	
	Ball peen hammer, 0.5 kgs	2 pcs.	Ball peen hammer, 0.5 kgs	2 pcs.
	End Mill 4, 6, 8, 10, 12,16 mm dia	32 pcs .	End Mill (HSS) 4, 8, 12,mm dia	4 pcs each
			End Mill (Carbide) 4, 8, 12,mm dia	4 pcs each
	NC start drill 10mm dia.	8 pcs.	---	
	Center drill # 2	16 pcs.	Center drill # 2	4 pcs
	Edge finder	8 pcs.	Edge finder	4 pcs
	Rubber mallet	8 pcs.	PU Soft Mallet	4 pcs
	Face Mill, 16 x 20 x 40mm dia.	8 pcs.	Face Mill (for carbide insert), 50mm/65mm dia	4 pcs
			Face Mill Holder/Stub arbor (to fit spindle and milling cutter bore)	4 pcs
	Drill bit dia.1mm-13mm set	6 boxes	Drill bit dia.1mm-13mm set	4 sets
	Slot cutter dia. 16 mm	8 pcs.	T-Slot cutter dia. 16 mm	4 pcs
			Tool holding Device: - Collet chuck (to fit milling spindle) - Collets (4mm-20mm) - Drill Chuck 0-13mm (straight shunk or equivalent)	4 pcs
			Machine Vise, 150x150mm	4 pcs
			Parallel Bars	1 set
			Clamp Down	1 set
	Needle File	8 sets	---	
	Letter punch	1 set	Letter punch	1 set
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Vernier caliper (Digital) 150mm	8 pcs.	Vernier caliper (Digital) 200mm Vernier caliper (Digital, Water Resistance) 200mm, 0.01 resolution	4 pcs
	Bevel protractor	1 pc.	Bevel protractor	1 pc.

	Vernier height gage with dial indicator (optional)	1 pc.	Vernier height gage with dial indicator (optional)	1 pc.
	Micrometer (Digital) 0- 25 mm	8 pcs.	Micrometer (Digital)	4 pcs.
	Thread pitch gage	1 pc.	---	
	Dial indicator with magnetic stand, lever-type, 0.01 least count	8 pcs.	Dial indicator with magnetic stand, lever-type, 0.01 least count	4 pcs.
	Gage block (optional)	1 set	Gage block (optional)	1 set
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	3-axis CNC Milling Machine with complete standard accessories	8 units	3-axis CNC Milling Machine with complete standard accessories, 12,000RPM (min), direct drive, x-500, y-500, z-500, Fanuc control or equivalent	4 units
	Power Hack saw	1 unit	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
	OHP/LCD Projector	1 unit	Multi-media system	1 lot
			Computer Workstation (As per minimum requirement of design and manufacturing software, CAD/CAM ready) 220 volts, 60 hz	10 units
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet good for at least 25 students	1 lot
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Aluminum bar 50x50mm x 5m, T6	2 pcs.	MS Square bar 50x50mm x 3m	1 pc
	Aluminum Flat bar 60 x 100mm x 5m, T6	1 pc.	MS Rectangular bar 60 x 100mm x 2.44m or equivalent	1 pc
	256 mb flash drive	16 pcs.	16GB flash drive	16 pcs.
	Paint brush 50 mm width	16 pcs.	Paint brush 50 mm width	16 pcs.
			Cutting Oil	1 pail
			Lubricating Oil,	1 pail

	Aluminum bar 50 x100mm x 5m, T6	2 pcs.	---	
	Rags	10 kgs.	Rags	10 kgs.
	Whiteboard marker Black, Blue and red color	3 boxes	Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set
	Teachers Guide	8 pcs.	---	
	CNC simulation software	16 pcs.	CNC simulation software	10 sets
	Catalogs		---	
	Modules/ LEs		Modules /CBLM	10 sets
	Handouts		---	
	Manuals	6 pcs.	Manuals	1 set
	Reference books		Reference books	1 lot
	Brochures		---	
	CDs/ Video tapes		---	

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : CNC MILLING MACHINE OPERATION NC II

Existing

The CNC Machining workshop must be of concrete structure for 16 trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (Permanent)	79M x 25M		1,975 sq. M
• CNC Basic Milling workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Intermediate and Production workshop	7.5M x 11.0M	82.5 sq. M	82.5 sq. M
• Quality Control room	10.0M x 11.0M	110 sq. M	110 sq. M
• Learning Resource Center	5.0M x 5.0M	25 sq. M	25 sq. M
• Audio Visual room	5.0M x5.0M	25 sq. M	25 sq. M
• Tool Room and Storage	10.0M x 11.0M	110 sq M	110 sq M
• Metrology room	7.0M x 11.0M	70 sq. M	70 sq. M

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
CNC Training Rm (CNC/ CAD/ CAM Rm)	10M x 5M	50sq.M
CNC Milling Machine Workshop	10M x 7M	70sq.M
Learning Resource Center / Audio Visual Room	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M
Metrology room	3M x 3M	9sq.M
Total area		**174 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**CNC MILLING MACHINE OPERATION NC II**

Existing	Amended
• Must be a holder of CNC Milling Machine Operation NC III Qualification or its equivalent • Must have undergone training on Training Methodology II (TM II) or equivalent in training experience • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	● Holder of National TVET Trainer Certificate Level I (NTTC Level I) in CNC Milling Machine Operation NC II; ● At least technology graduate related to Mechanical Engineering or Mechanical Designing; and ● Must have at least 2 years' industry experience in CNC Machining operations or at least 3 years teaching experience with industry immersion relevant to CNC Milling machine operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
CNC MILLING MACHINE OPERATION NC III	Staggered tooth side cutter dia. 36mm x 5mm	8 pcs.	---	
	Face Mill, 40, 50, 63 mm dia.	3 pcs.	Face Mill 50, dia. With 2 boxes inserts each	1 set
	Dovetail cutter, 16 mm dia.	8 pcs.	Dovetail cutter, 16 mm dia.	1 pc
	Center drill # 2	16 pcs.	Center drill # 2	1 pc
	Edge finder	8 pcs.	Edge finder	1 pc
	Rubber mallet	8 pcs.	PU Soft Mallet	1 pc
	End Mill 4, 6, 8, 10, 12, 16 mm dia	32 pcs.	Carbide End Mill 4, 8, 12 mm dia	2 pcs each
	Hand Tap M6, M8, M10, M12	3 sets	---	
	Drill bit dia.1mm-13mm set	6 boxes	HSS with Cobalt Coated Drill bit dia.1mm-13mm set	1 box
	Slot cutter dia. 16 mm	8 pcs.	T-Slot cutter dia. 16 mm	1 pc
	Needle File	2 sets	Needle File	1 set
	Letter punch	1 set	Letter punch	1 set
	Ball nose endmill, 3, 6, 8, 10, 12mm	8 pcs.	Ball nose endmill, 8mm	1 pc
	NC start drill 10mm dia.	8 pcs.	---	
	Machine tap M5, M6, M8, M10 , M12	8 pcs each	Machine tap M10	2 pcs
	Engraving Tool	8 sets	Engraving Tool	1 set
	Flat File, 2nd cut, 150 mm	8 pcs.	Flat File, 2nd cut, 150 mm	1 pc
	Ball peen hammer, 0.5 kgs	2 pcs.	Ball peen hammer, 0.5 kgs	2 pcs.
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Vernier caliper (Digital) 150mm	8 pcs.	Vernier caliper (Digital, Water Resistance) 200mm, 0.01 resolution	2 pcs
	Bevel protractor	1 pc.	Bevel protractor	1 pc.
	Vernier height gage with dial indicator (optional)	1 pc.	Vernier height gage with dial indicator (optional)	1 pc.
	Micrometer (Digital) 0- 25 mm	8 pcs.	Micrometer (Digital)	2 pcs
	Thread pitch gage	1 pc.	Thread pitch gage	1 pc.
	Dial indicator with magnetic stand, lever-type, 0.01 least count	8 pcs.	Dial indicator with magnetic stand, lever-type, 0.01 least count	1 pc

	Gage block (optional)	1 set	Gage block (optional)	1 set
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	3-axis CNC Milling Machine with complete standard accessories	8 units	3-axis CNC Milling Machine with complete standard accessories, 12,000RPM (min), direct drive, x-500, y-500, z-500, fanuc control or equivalent	1 Unit
	OHP/LCD Projector	1 unit	LCD Projector	1 unit
	4 or more axes CNC Milling Machine	1 unit	---	
	Power Hack saw	1 unit	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
			Computer Workstation (As per minimum requirement of design and manufacturing software, CAD/CAM ready) 220 volts, 60 hz	10 units
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet good for at least 25 students	1 lot
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Aluminum bar 50x50mm x 5m, T6	2 pcs.	AISI 1045/4140 Square bar 50x50mm x 3m	1 pc.
	Aluminum Flat bar 60 x 100mm x 5m, T6	1 pc.	MS Rectangular bar 60 x 100mm x 2.44m or equivalent	1 pc.
	MS plate 50 x100mm x 2.4m	2 pcs.	MS plate 50 x100mm x 2.44m	1 pc.
	256 mb flash drive	16 pcs.	16GB flash drive	1 pc
	Rags	10 kgs.	Rags	10 kgs.
	Aluminum bar 50 x100mm x 5m, T6	2 pcs.	---	
	MS Square bar 50x50mm x 6m	2 pcs.	---	
			Cutting Oil	1 pail
			Lubricating Oil	1 pail

	Paint brush 50 mm width	16 pcs.	Paint brush 50 mm width	1 pc
	Whiteboard marker Black, Blue and red color	3 boxes	Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set
	Teachers Guide	8 pcs.	---	
	CNC simulation software	16 pcs.	License CAD/CAM Software	4 sets
	Catalogs		---	
	Modules/ LEs		Modules /CBLM	10 sets
	Handouts		---	
	Manuals	6 pcs.	Manuals	1 set
	Reference books		Reference books	1 lot
	Brochures		---	
	CDs/ Video tapes		---	

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : CNC MILLING MACHINE OPERATION NC III

Existing

The CNC Machining workshop must be of concrete structure for 16 trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (Permanent)	79M x 25M		1,975 sq. M
• CNC Basic Milling workshop	10.0M x 5.5M	55 sq. M	55 sq. M
• CNC Intermediate and Production workshop	7.5M x 11.0M	82.5 sq. M	82.5 sq. M
• Quality Control room	10.0M x 11.0M	110 sq. M	110 sq. M
• Learning Resource Center	5.0M x 5.0M	25 sq. M	25 sq. M
• Audio Visual room	5.0M x5.0M	25 sq. M	25 sq. M
• Tool Room and Storage	10.0M x 11.0M	110 sq M	110 sq M
• Metrology room	7.0M x 11.0M	70 sq. M	70 sq. M

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
CNC Training Rm (CNC/ CAD/ CAM Rm)	10M x 5M	50sq.M
CNC Milling Machine Workshop	10M x 7M	70sq.M
Learning Resource Center / Audio Visual Room	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M
Metrology room	3M x 3M	9sq.M
Total area		**174 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**CNC MILLING MACHINE OPERATION NC III**
Existing	**Amended**
• Must be a holder of CNC Milling Machine Operation NC III Qualification or its equivalent • Must have undergone training on Training Methodology II (TM II) or equivalent in training experience • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	● Holder of National TVET Trainer Certificate Level I (NTTC Level I) in CNC Milling Machine Operation NC III; ● At least technology graduate related to Mechanical Engineering or Mechanical Designing; and ● Must have at least 2 years' industry experience in CNC Machining operations or at least 3 years teaching experience with industry immersion relevant to CNC Milling machine operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
MACHINING NC II	Precision Square 10 "	2 pcs	Precision Square 10 "	3 pcs
			Precision Square 6 "	3 pcs
	Sine Bar	1 Set	Sine Bar (Optional)	1 Set
	Honing tool	1 Set	Honing tool (optional)	1 Set
	Extractor	1 set	Screw extractor	1 set
	Center punch	1 Set	Center punch 100 mm length	6 pcs
	Prick punch	1 Set	Prick punch 100 mm length	2 pcs
	Scriber	6 pcs.	Scriber	6 pcs.
	Ball peen Hammer 12 oz	6 pcs.	Ball peen Hammer 250 g	10 pcs
	Allen Wrench1 mm to 10 mm	2 sets	Allen Wrench 1.5-12mm	2 sets
	Open end wrench 4mm to 20 mm	2 sets	Combination (open & close) wrench 8-22 mm	2 sets
			Edge finder 10 mm dia (ball)	3 pcs
			Adjustable wrench 200mm length	3 pcs
			V-block 50 x 50 x 100 mm	3 pcs
			Parallel bars 100 x 30 x 10 mm	2 pairs
			Parallel bars 100 x 20 x 10 mm	2 pairs
			Parallel bars 100 x 15 x 10 mm	2 pairs
			Thread Gage (ACME)	2 pcs
			Taper Gage, Morse Taper #3x#4 (To fit lathe machine head stock spindle)	2 pcs
			Lathe dog 25 mm dia	3 pcs
			Lathe dog 50 mm dia	3 pcs
			Revolving Center (to fit tail stock)	5 pcs
			Drill Chuck with key (to fit tail stock)	5 pcs
			Dead Center (to fit head stock)	5 pcs.
			Boring Bar 12mm dia std	5 pcs.
			Tool Holders: 9.5 mm (3/8 inch) ● Straight ● Right hand ● Left Hand	5 sets
			Parting-Off Holder (to fit cutting-off)	5 pcs
			Surface Gage	5 pcs

			Collet chuck for milling 4-20 mm (to fit spindle of Vertical Milling Machine)	3 sets
			Stud arbor for face mill (taper number to fit vertical milling machine spindle)	3 sets
			Drill Chuck 0-13 mm, straight shank 20 mm	3 pcs
			Milling machine Angle plates (Optional)	5 pcs.
			Clamp Down M12 x 50mm-100mm	3 sets
			Automatic tapping attachment (Optional)	1 pc
			File Card standard size	5 pcs
			Hand Hacksaw 300 mm length	5 sets
			PU Soft Mallet	8 pcs
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Cutting tools		**Cutting tools**	
	Description	**Qty**	**Description**	**Qty**
	Scraper (flat & curve)	1 set	Scraper (flat & curve)	1 set
	Drill 1mm to 12 mm ct	1 Set	Drill 3mm to 12 mm	4 sets
	Tap 4mm to 12 mm dia.	1 Set	Tap with holder 4mm to 12 mm dia.	4 sets
	Die 4 mm to 12 mm dia.	1 set	Stock and Die 4 mm to 12 mm dia.	2 sets
	Cold chisels 6 “	2 pcs	---	
	Cape chisel 6”	2 pcs.	---	
	Diamond point Chisel 6“	2 pcs.	---	
	Round nose Chisel 6“	2 pcs.	---	
	Side milling cutter 2 ½ dia	2 pcs	HSS Side milling cutter 75mm dia x 12 mm, 25.4 mm bore	2 pcs
	45 degrees milling cutter 2 ½ dia.	2 pcs	HSS 60deg Dovetail cutter 25 mm dia.	2 pcs
	Gear Cutter 1.5 M	1 set	---	
	Gear Cutter 2.0 M	1 Set	Involute gear cutter module 2.0, 20 deg. P.A., 25.4 mm bore	1 set
	Slitter cutters	2 pcs.	HSS Slitting cutter 75 mm dia x 3.0 mm wide, 25.4 mm bore	2 pcs
	Slot Cutters	2 pcs.	HSS T-slot cutter 25 mm dia x 10 mm width	2 pcs
			HSS end mill 4mm dia	10 pcs
			HSS end mill 12mm dia	5 pcs
			HSS end mill 20mm dia	2 pcs

			Counter bore tool 14 mm dia (Optional)	1 pc
			Counter sink tool 14 mm dia (Optional)	1 pc
			Carbide insert, (to fit face mill) triangular	2 boxes
			Face mill holder, 65mm dia. 4-tooth (shank to milling spindle	3 pcs.
			Grinding Wheel (alu- silicate) dia 8” x dia 1” x 1” x 1”	2 pcs
			Triangular file 8”	5 pcs
			Flat file 8” bastard	5 pcs
			Flat file 8” smooth	5 pcs
			Half-round file 6”	5 pcs
			Fixed reamer dia 12mm	1 pc
	Measuring tools		**Measuring tools**	
	Description	**Qty**	**Description**	**Qty**
	Steel Rule12 “	6 pcs.	Steel Rule 12 “	3 pcs
	Vernier caliper 150mm	10 pcs.	Vernier caliper 150mm, 0.02 /.05 mm resolution	20 pcs
	Vernier caliper 200mm	5 pcs.	---	
	Vernier caliper 300mm	2 pcs.	---	
	Micrometer 0-25	5 pcs.	Micrometer 0-25, 0.01 mm resolution	5 pcs
	Micrometer 25-50	3 pcs.	Micrometer 25-50, 0.01 mm resolution	3 pcs
	Micrometer 50-75	2 pcs.	---	
	Dial Indicator Plunger type	3 Sets	Dial Indicator Plunger type, 0-10mm range, 0.01 mm resolution with magnetic stand	2 pcs
			Dial Indicator Lever type, 2 mm range, 0.01 mm resolution with magnetic stand	2 pcs
	Vernier height gage	1 Set	Vernier height gage w/ scriber 300mm, 0.02 mm resolution	1 set
			Surface Plate w/ table (Cast iron), 600 mm x 600 mm	1 set
	Gear Tooth caliper	1 set	Mt Gear Tooth caliper, 0.02 mm resolution	1 set
	Radius Gage	1 set	Radius gage combination (convex & concave), 1-7mm	1 set
	Center gage	2 Sets	Center gage	2 sets
	Bevel Protractors	2 Sets	Bevel Protractors	2 sets
	Gage Block	1 Set	Gage Block, 0.5-50mm range (optional)	1 set

	Thread Gage	2 Sets	---	
	PPE's		**PPE's**	
	Description	**Qty**	**Description**	**Qty**
	First –Aid kit	1 box	First –Aid kit	1 box
	Safety Goggle	25 pcs.	Safety Goggle	26 pcs
	Safety Shield	10 pcs.	Safety Shield	10 pcs.
			Dust/ face mask	26 pcs
			Safety shoes (to be provided by the trainees)	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Two Head Bench Grinder	2 units	Two Head Bench Grinder 0.5 hp	2 units
	Bench Drill w/ Drill Vise	2 units	Bench Drill w/ key	2 units
			Bench Drill Vise 150 mm gap	2 units
			Heavy Duty Work Bench	4 units
			Bench Vise, (opening 150mm)	4 units
	Lathe Machine 10'" swing Complete with: (1 unit each machine) ● 3-jaw chucks ● 4-jaw chucks ● Face Plates ● 1 set lathe dogs ● Revolving Centers ● Drill Chucks ● Dead Centers ● 1 Set Boring Bars ● Follower rest ● Steady Rest ● Tool Holders: Facing, Straight, RH,LH ● Parting-Off Surface Gage	3 units	Lathe Machine 150 mm swing over bed, 600mm distance between centers, w/ 3 hp motor, 220 v, three phase, 60 hz Accessories per lathe machine/ per pc ● 3-jaw chuck ● Face Plate ● Follower rest ● Steady Rest ● 4-jaw ● Change gears set	5 units

	● Milling Machine Universal complete w/ accessories per machine: -Clamping bolts -Milling Vises - Angle plates ● - Rotary table - Indexing Head with: 3-jaw chuck, gears, footstock and center	2 units	Horizontal Milling Machine (universal) # 3, 5 hp motor, 220 v, Three phase, 60 hz Accessories per milling machine/ per pc ● Indexing Head for milling machine #3 w/ change gears ● Swivel base Milling Vise (150mm opening) ● Universal Vertical Attachment ● Rack gear Milling attachment ● Arbor 25.4 mm dia (to fit spindle bore)	2 units
			Milling Machine (Vertical) # 3, 5 hp motor, 220 v, Three phase, 60 hz Accessories per milling machine/ per pc ● Rotary Table 300 mm dia ● Swivel base Milling Vise (150mm opening) ● Universal Vertical Attachment ● Slotting attachment ● Rack gear Milling attachment ● Tool Arbors for Milling - Shank (to fit spindle bore)	3 units
	Power Saw complete with accessories	1 unit	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
	Band Saw complete with accessories	1 unit	---	
	Plain cylindrical grinder complete w/ accessories	1 unit	---	
	Universal Cylindrical grinder complete w/ accessories	1 unit	Universal cylindrical grinder complete w/ accessories, hp motor, 220 v, three phase, 60 hz Smallest standard machine	1 unit
	Universal Tool and Cutter Grinder Complete w/ accessories	1 unit	Universal Tool and Cutter Grinder Complete w/ accessories to include tools for internal grinding, hp motor, 220 v, three phase, 60 hz Smallest standard machine	1 unit
			Surface Grinder 300 mm stroke x 200 mm width with complete accessories (magnetic vise,)	1 unit

			220 v, single phase, 60 hz, (automatic feed X,Y)	
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker Cabinet good for at least 25 students	1 lot
			Exhaust Fan	2 units
	Additional Accessories		**Additional Accessories**	
	Description	**Qty**	**Description**	**Qty**
	- Clamps w/ bolts		---	
	- Angle plates		---	
	- Parallels		---	
	- Wheel balancing		- Grinding Wheel balancer	1 set
	- Diamond Wheel dresser		- Diamond Wheel dresser with holder	1 set
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	HSS tool bit (Momax) 3/8 x 3/8 x 2” 1/4 x 1/4 x 2”	 50 pcs 50 pcs.	High speed steel tool bit 9.5mm x 9.5mm omit	30 pcs
			Parting tool bit x 3mm thickness (to fit tool holder)	3 pcs
	CRS 12mm dia	2 pcs.	---	
	CRS 19mm dia	2 pcs.	CRS 32mm dia x 6M	1 length
	CRS 50 mm dia.	1 pc.	CRS 25.4mm dia.x 6M	1 length
	CRS 25mm dia.	2 pcs.	CRS 50 mm dia.x 3M	1 length
	Center drill # 3 and # 2	10 pcs.	Center drill # 3	10 pcs
	Grinding wheel for bench grinder	4 pcs.	Carborundum Aluminum Oxide Grit 60,	1 set
	Drill 3mm to 12 mm	2 Sets	Grinding Wheel Silicon Carbide Grit 80,	1 set
	Carbide insert	5 pcs.	Cemented Carbide ⅜ (Left & Right)	10 pcs each
	Hack saw blade	6 doz.	Hand Hacksaw Blade, 18TPI 300 mm length	1 box
	Power hack saw blade	1 doz.	Power hack saw blade	3 pcs
	Oil Stone	2 pcs	Oil Stone	1 pc

	Reference books		Reference books	1 lot
	Manuals		Manuals (for the machines)	1 set
	Catalogs		---	
	Brochures		---	
	Modules / LEs		Modules / CBLM	10 sets
	CDs/Video tapes		---	
	Fire extinguisher	4 cyl.	Fire extinguisher	4 cyl.
			Welding Electrode #6011 3mm dia	5 kg
			Welding Electrode #6013 3mm dia	5 kg
			Steel brush	6 pcs.
			MS Plate 9.5mmx50mmx6m	2 pcs
			Cutting Oil	1 pail
			Lubricating Oil	1 pail
			Paint Brush, 25 mm	10 pcs
			Paint Brush, 50 mm	10 pcs
			Rags	10 kg
			Sand Paper #150	1 box
			Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : MACHINING NC II

Existing

3.5 TRAINING FACILITIES
MACHINING NC II

The machining workshop must be of concrete structure for 25 students/trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	10 M X 30 M		300 Sq. M
▪ Trainee working space	2 M X 2 M	4 Sq.M / trainee	100 Sq. M
▪ Lecture Room	8 M X 10 M	80 Sq. M.	80 Sq. M
▪ Learning Resource Center	4 M X 8 M	32 Sq. M	32 Sq. M
▪ Facilities/ Equipment/ Circulation Area			88 Sq. M

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			300 sq.M
Trainee working space	2M x 2M	4 sq.M / trainee	100 sq.M
Lecture Room	6M x 6M	36 sq. M	36 sq.M
Learning Resource Area	4M x 8M	32 sq. M	32 sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M	15 sq.M
Metrology room	3M x 3M	9sq.M	9 sq.M

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**MACHINING NC II**
Existing	**Amended**
• Must be a holder of Machining NC III Qualification or its equivalent • Must have undergone training on Training Methodology II (TM II) or equivalent in training experience • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	• Holder of National TVET Trainer Certificate (NTTC) Level I in Machining NC III; • At least technology graduate related to Mechanical Engineering; and • Must have at least 2 years industry experience in Machining and industry operations or at least 3 years teaching experience with industry immersion relevant to Machining and Fabrication

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
MACHINING NC III	**Drawing / Lay Out Tools**		**Drawing / Lay Out Tools**	
	Description	**Qty**	**Description**	**Qty**
	Drawing table	5 pcs	Drawing table	13 pcs
	30 x 60 degrees triangle	5 pcs	30 x 60 degrees triangle	13 pcs
	45 degrees triangle	5 pcs	45 degrees triangle	13 pcs
	Protractor	5 pcs	Protractor	13 pcs
	Ruler	5 pcs	Steel Ruler 6"	13 pcs
	Scale Ruler 12"	5 pcs	Scale Ruler 12"	13 pcs
	Compass	5 pcs	Compass	13 pcs
	Drawing pencil	2 Sets	Drawing pencil / Mechanical pencil	25 sets
	Surface Plate 500x500 mm	1 pc	Surface Plate (C.I) 500x500 mm (min. reqt)	1 pc
	Center punch	2 Sets	Center punch	2 sets
	Prick punch	2 Sets	Prick punch	2 sets
	Scriber	2 Sets	Scriber	25 sets
	Divider	5 pcs	Divider	25 pcs
	Combination set	2 Sets	Combination Wrench (open and closed) set	2 sets
	Vernier Height gauge 12"	2 Units	Vernier Height gauge 12"	2 units
	Soft hammer	5 pcs	PU Soft Mallet	5 pcs
	Steel square 6"	5 pcs	Steel square 6"	5 pcs
	V-block 50x75 mm	2pcs	V-block 50x75 mm	2pcs
	Ball peen hammer 12 ounce	10 pcs	Ball peen hammer 12 ounce	15 pcs
			Vernier Protractor	5 pcs
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Measuring tools		**Measuring tools**	
	Description	**Qty**	**Description**	**Qty**
	Vernier caliper 150mm	10pcs	Vernier caliper 150mm, 0.02 /.05 mm resolution	20 pcs
	Vernier caliper 200mm	5pcs	---	
	Vernier caliper 300mm	2pcs	---	
	Drill gauge	2 pcs	Drill gauge	2 pcs
	Micrometer Caliper 0-25	5 pcs	Micrometer Caliper 0-25 (Res. 0.01)	5 pcs
	Micrometer Caliper 25-50	3 pcs	Micrometer Caliper 25-50 (Res. 0.01)	3 pcs

	Micrometer Caliper 50-75	2 pcs	---	
	Bore gauge	1 pc	Bore gauge (telescopic)	1 pc
	Dial Indicator Plunger type with magnetic stand	3 Sets	Dial Indicator Plunger type with magnetic stand	2 Sets
			Lever Type Dial Indicator with magnetic Stand	2 Sets
	Drill gauge	2 pcs	---	
	Screw pitch gauge	2 pcs	Screw pitch gauge	2 pcs
	Thread gage – Vee and Acme	1 set	Pitch Thread gage	2 set
	Taper gauge	1 set	Taper gauge	1 set
	Center gage	2 pcs	Center gauge	5 pcs
	Inside micrometer	1 set	Telescopic Gauge	1 set
	Radius gauge	1 set	Radius gauge (Combi)	1 set
	Surface finish gauge block	1 set	Surface finish gauge block	1 set
			Surface Finish Comparator	1 set
	Gear tooth caliper	1 pc	Gear tooth caliper (res. Or least count)	1 pc
	Bench tools		**Bench tools**	
	Description	**Qty**	**Description**	**Qty**
	Hack saw frame	10 pcs	Hand Hacksaw 300 mm length	15 pcs
	Anvil	3 pcs	---	
	Round file	10 pcs	Round file	10 pcs
	Needle file	2 Sets	Needle file	2 sets
	Open end wrench 4 mm to 20 mm	2 Sets	---	
	Wheel dresser	2 pcs	Wheel dresser	2 pcs
	Bench vice	10 pcs	Bench vice	4 pcs
	Flat file	10 pcs	File Set (min. reqt. 250mm L)	10 pcs
	Triangular file	10 pcs	Triangular file	10 pcs
	Allen wrench 4 to 10 mm	2 sets	Allen wrench 4 to 12 mm	2 sets
	Screw driver length 140 & 160	2 sets	Screw driver length 140 & 160	2 sets
	Oil can	6 pcs	Oil can	6 pcs
	Square file	10 pcs	Square file	10 pcs
	Half round file	10 pcs	Half round file	10 pcs
	Drills 4 mm to 12 mm	2 sets	Drills 4 mm to 12 mm	2 sets
	Adjustable Wrench 10”	5 pcs	Adjustable Wrench 10”	5 pcs
	Safety Devices		**Safety Devices**	
	Description	**Qty**	**Description**	**Qty**
	First Aid Kit	1box	First Aid Kit	1box
	Safety Goggle	25 pcs	Safety Goggle	25 pcs

	Safety Shield	5 pcs	Safety Shield	5 pcs
	Fire Extinguisher	4 Cyl	Fire Extinguisher	4 Cyl
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Two Head Bench Grinder	2 Units	Two Head Bench Grinder 0.5 hp	2 Units
	Bench Drill w/ Drill Vise	2 Units	Bench Drill w/ Drill Vise	2 Units
			Bench Drill Vise 150 mm gap	2 units
			Heavy Duty Work Bench	4 units
			Bench Vise, (opening 150mm)	4 units
	Lathe Machine 10" swing Complete with: (1 unit each machine) 3-jaw chucks 4-jaw chucks Face Plates Follower rest Steady Rest	3 Units	Lathe Machine 150 mm swing over bed, 600mm distance between centers, w/ 3 hp motor, 220 v, three phase, 60 hz Accessories per lathe machine/ per pc ● 3-jaw chuck ● Face Plate ● Follower rest ● Steady Rest ● 4-jaw ● Change gears set	5 units
	1 set lathe dogs		---	
	Revolving Centers		---	
	Drill Chucks		---	
	Dead Centers		---	
	1 Set Boring Bars		---	
	Tool Holders		---	
	Facing, Straight, RH,LH		---	
	Parting-Off		---	
	Surface Gage		---	
	1set Knurling tool		---	
	<u>Milling Machine Universal complete w/ accessories per machine:</u>	2 Units	---	
	Clamping bolts		---	
	Milling Vises		---	
	Angle plates		---	
	<u>Indexing Head with:</u>		---	
	3-jaw chuck, gears,		---	
	footstock and center		---	
	Side and face mill	2 pcs	---	

	T-slot cutter	2 pcs	---	
	End mills	1 Set	---	
	Slab mill	2 pcs	---	
	Shell mill	2 pcs	---	
	Form cutter	2 pcs	---	
	Slitter cutter	2 pcs	---	
	T-Slot Cutter	2 pcs	---	
	45 degrees cutter	2 pcs	---	
	Universal Cylindrical grinder complete w/ accessories	1 Unit	Universal cylindrical grinder complete w/ accessories, hp motor, 220 v, three phase, 60 hz, 300mm between center	1 unit
	Universal Tool and Cutter Grinder Complete w/ accessories	1 Unit	Universal Tool and Cutter Grinder complete w/ accessories to include tools for internal grinding, hp motor, 220 v, three phase, 60 hz Smallest standard machine	1 unit
	Gear Cutters 1M one set	1 set	---	
	Gear Cutters 1.5M one set		---	
	Gear Cutters 1.75M one set		Gear Cutter 2.0M	1 set
			Milling Machine (Vertical) # 3, 5 hp motor, 220 v, Three phase, 60 hz Accessories per milling machine/ per pc ● Rotary Table 300 mm dia ● Universal Vertical Attachment ● Slotting attachment ● Rack gear Milling attachment ● Tool Arbors for Milling - Shank (to fit spindle bore	3 units
			Power Hacksaw complete with accessories,1 hp motor, 220 v, three phase, 60 hz	1 unit
			Surface Grinder 300 mm stroke x 200 mm width with complete accessories 220 v, three phase, 60 hz, (automatic feed X,Y)	1 unit
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot

			Whiteboards with eraser	1 lot
			Tables and Chairs	1 lot
			Locker Cabinet good for atleast 25 students	1 lot
			Exhaust Fan	2 units
	Additional Accessories		**Additional Accessories**	
	Description	**Qty**	**Description**	**Qty**
	Clamps w/ bolts	1 Sets	Clamps down	1 set
	Angle plates	1 Sets	Angle plates	1 set
	Parallels	1 Sets	Parallel bars	1 set
	Wheel balancing	1 Sets	Wheel balancing	1 set
	Diamond Wheel dresser	2pcs	Diamond Wheel dresser	1 pc
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Bench / Lathe / Milling Works		Bench / Lathe / Milling Works	
	Layout dye	1 Doz	Layout dye	1 bottle
	Brush ½”	6 pcs	Paint Brush, 12 mm	13 pcs
			Paint Brush, 50 mm	13 pcs
	Hack saw blade	6 Doz	Hand Hacksaw Blade, 18TPI 300 mm length	1 box
	power Hack saw blade	1 Doz	power Hack saw blade	3 pcs
	Lubricating oil	5 Gal	Lubricating oil	1 pail
			Cutting Oil	1 pail
	Split bearing (Project)	2 pcs	---	
	Steel plate gauge 10 - 4’x8’	1 pc	---	
	CRS 12 mm dia x 6M	2 pcs	---	
	Steel plate 25mm x 100 mm x 2M	1 pcs	Steel plate 25mm x 100 mm x 2.4M (for split bushing project)	1 pc
	HSS (Momax) 3/8x3/8x2”	25 pcs	Carbide Inserts with Tool holder for (Left,Right,Neutral,Thread, Parting) Tools	5 sets
	HSS (Momax) 1/4x1/4x2”	25 pcs	---	
	HSS (Momax) 1/8”x 1" x 4”	25 pcs	---	
	CRS 19mm dia x 6M	2 pcs	---	
	CRS 50 mm dia.x 6M	1 pc	CRS 50 mm dia.x 6M	1 pc
	CRS 12mm dia x 6M	2 pcs	---	
	CRS 25mm dia.x 6M	2 pcs	---	
	Center drill # 2	10 pcs	---	
	Center drills # 3	10 pcs	Center drill # 3	10 pcs
	Drills 3 mm to 12 mm	2 Sets	Drills 3 mm to 12 mm	2 sets

	Carbide insert	5 pcs	Carbide insert, (to fit face mill) triangular	2 boxes
	File Card brush	10 pcs	File Card brush	10 pcs
	CRS 100mm x 1M	1 pc	---	
	CRS 50mm dia.x 2 M	1 pc	TS 4140;50mm dia.x 2 M	1 pc
	CRS 75 mm Dia x 1 M	1 pc	---	
	CRS 100 mm dia x 1 M	1 pc	---	
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**
	Reference books		Reference books	1 lot
	Manuals		---	
	Catalogs		---	
	Brochures		---	
	Modules / LEs		Modules / CBLM	1 set
	CDs/Video tapes		Audio Visual Training tools	1 lot
			Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : MACHINING NC III

Existing

3.5 TRAINING FACILITIES
MACHINING NC II

The machining workshop must be of concrete structure for 25 students/trainees. The space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	10 M X 30 M		300 Sq. M
▪ Trainee working space	2 M X 2 M	4 Sq.M / trainee	100 Sq. M
▪ Lecture Room	8 M X 10 M	80 Sq. M.	80 Sq. M
▪ Learning Resource Center	4 M X 8 M	32 Sq. M	32 Sq. M
▪ Facilities/ Equipment/ Circulation Area			88 Sq. M

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			300 sq.M
Trainee working space	2M x 2M	4 Sq.M / trainee	100 sq.M
Lecture Room	6M x 6M	36 Sq. M	36 sq. M
Learning Resource Area	4M x 8M	32 Sq. M	32 sq. M
Tool Room and Storage Rm	3M x 5M	15 sq.M	15 sq.M
Metrology room	3M x 3M	9 sq.M	9 sq.M

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**MACHINING NC III**
Existing	**Amended**
• Must be a holder of Machining NC III Qualification or its equivalent • Must have undergone training on Training Methodology III (TM III) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	• Holder of National TVET Trainer Certificate (NTTC) Level I in Machining NC III; • At least technology graduate related to Mechanical Engineering; and • Must have at least 2 years industry experience in Machining and industry operations or at least 3 years teaching experience with industry immersion relevant to Machining and Fabrication

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
MECHANICAL DRAFTING NC I	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Drawing table	25 pcs.	Drawing table	25 pcs.
	30 x 60 degrees triangle	25 pcs.	30 x 60 degrees triangle	25 pcs.
	45 degrees triangle	25 pcs.	45 degrees triangle	25 pcs.
	Protractor	25 pcs.	Protractor	25 pcs.
	Ruler	25 pcs	Steel Ruler (0-300mm)	25 pcs
	Scale Ruler 12 "	25 pcs.	Steel Tape (0-3000mm)	25 pcs.
	Compass	25 pcs	Compass	25 pcs
	Drawing pencil	25 set	Drawing pencil	25 set
	Triangular scale	25 pcs	Triangular scale	25 pcs
	Scale	25 pcs	---	
	Protractor	25 pcs.	---	
	Vernier caliper 200mm	15 pcs.	Vernier caliper 1500mm	15 pcs
	Gauges	10 pcs.	Gauges	10 pcs.
	Micrometer 50-75	15 pcs.	Micrometer (0-25mm)	15 pcs.
	Sine bars	10 pcs.	---	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Photocopier machine	1 unit	---	
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Tool cabinets and Racks	1 lot
			Whiteboard marker Black, Blue and red color with eraser (option to use 1 marker each with refillable inks)	1 set
			Table and Chairs	1 lot
			Locker Cabinet good for atleast 25 students	1 lot
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	First –Aid kit	1 box	First –Aid kit	1 box
	Fire extinguisher	4 cyl	Fire extinguisher	4 cyl
	Safety shoes	25 pcs	---	
	Drawing paper		A4 Drawing paper	1 ream

			Whiteboard marker Black, Blue and red color	3 boxes
	White prints		---	
	A4 folders		A4 folders	100 pcs
	Drawing binders		---	
	Reference books		Reference books	1 lot
	Manuals		Manuals	6 pcs.
	Catalogs		Catalogs	1 set
	Brochures / LE s		Brochures / LE s	1 lot
	CD s / Video tape		---	
	Brooms	20 pcs	---	
	Scrapers	10 pcs	---	
	Clean rags	10 kg	---	
	Mops	10 pcs	---	
	Soap	2 bars	---	
	Dustpan	5 pcs	---	
	Trash can	2 pcs.	---	

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : MECHANICAL DRAFTING NC I

Existing

3.5 TRAINING FACILITIES
MECHANICAL DRAFTING NC I

The Drafting workshop must be of concrete structure. Based on class size of 25 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	10 M X 30 M		300 Sq. M
▪ Trainee working space	2 M X 2 M	4 Sq.M / trainee	100 sq. M.
▪ Lecture Room	8 M X 10 M	80 Sq. M.	80 Sq. M
▪ Learning Resource Center	4 M X 8 M.	32 Sq. M	32 Sq. M
▪ Facilities/ Equipment/ Circulation Area			88 Sq. M.

Amended

Space Requirement	Size in Meters	Area in Sq. Meters
Lecture Room	10M x 5M	50sq.M
Trainees Working Space	10M x 7M	70sq.M
Learning Resource Center	6M x 5M	30sq.M
Tool Room and Storage Rm	3M x 5M	15sq.M
	Total area	**165 sq.M**

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR		
Qualification:	**MECHANICAL DRAFTING NC I**	
Existing		**Amended**
• Must be a holder of Mechanical Drafting NC I • Must have undergone training on Training Methodology I (TM I) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)		• Must be a holder of National TVET Trainer Certificate (NTTC) Level I in Mechanical Drafting NC I; • At least technology graduate related to Mechanical Engineering or Mechanical Designing; and • Must have at least 2 years' related industry or at least 3 years related teaching experience and 240 hours relevant training

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
PLANT MAINTENANCE NC I	Vernier caliper, 150	6	-------	-------
	Vernier caliper, 200	6	Vernier caliper (standard), 200, Res. 0.02	6 pcs.
	Steel measure tape	12	-------	-------
	Straight edge	4	Straight edge, 1m	4 pcs.
	Surface plate	1	Surface plate, CI, 600x600mm	1 pc
	Steel tape	12	Steel tape, 6m	12 pcs.
	Micrometer, 25-50	3	Micrometer, 0-25 (Res. 0.01)	3 pcs.
			Micrometer, 25-50 (Res. 0.01)	3 pcs.
			Micrometer, 50-75 (Res. 0.01)	3 pcs.
	Vernier depth gage	3	Vernier height gage, 0-300 (Res. 0.02)	1 pc
	Inside caliper	3	Inside caliper	3 pcs.
	Outside caliper	3	Outside caliper	3 pcs.
	Micrometer, 50-75	3	-------	-------
	Outside caliper	4	-------	-------
	Spring caliper	4	-------	-------
	Dial indicator w/ mounting bracket	4	Dial indicator w/ magnetic stand, lever type, Res. 0.01	2 pcs.
			Dial indicator w/ magnetic stand, plunger type, Res. 0.01	2 pcs.
	Dividers	6	Dividers	6 pcs.
	Compass	6	Compass	6 pcs.
	Scribers	12	Scribers	12 pcs.
	Triangles	6	Triangles	6 pcs.
	Scissors	6	Scissors	6 pcs.
	Workbench	4	Workbench	4 pcs.
	Bench vise	8	Bench vise, 150mm	8 pcs.
	Anvil	4	Anvil	4 pcs.
	Sledge hammer	4	Sledge hammer	4 pcs.
	Ball pein hammer	12	Ball pein hammer	12 pcs.
	Mallet	6	PU Soft Mallet	6 pcs.
	Adjustable reamers	3	Adjustable reamers (12-25mm)	3 pcs.
	Hook spanner	1	Hook spanner	1 pc.
	Precision level	2	Precision level	2 pcs.

	Knife	6	Utility Knife	6 pcs.
	Portable drill		Electric hand drill, 0-13mm	1 pc.
			Angle Grinder, 100mm dia.	1 pc.
			Riveter, 3-6.4mm)	1 pc.
	Set of screwdriver	12	Set of screwdrivers	6 pcs.
	Set of open wrench	12	Set of combination (open/box) wrench, 3-32mm	6 pcs.
	Set of socket wrench	12	Set of socket wrench, 3-32mm	6 pcs.
	Set of Allen wrench	12	Set of Allen wrench, 3-12mm	6 pcs.
	Set of pliers	12	Set of pliers	6 pcs.
	Set of drills	6	Set of drills, 3-12mm	6 pcs.
	Set of taps with wrench	6	Set of taps with wrench, M3-M12	6 pcs.
	Impact spanner	1	Impact spanner	1 pc.
	Straightedge	2	--------	--------
	Paper cutter	6	Paper cutter	6 pcs.
	Set of tin snips	4	Tin snips	6 pcs.
	Hacksaw	6	Hand Hacksaw 300 mm length	6 pcs
	Chisels	12	Set of Chisels	12 sets
	Files	12	Set of Files (standard)	12 sets
	Set of Scraper	4	Set of Scraper (standard)	4 sets
	Pipe threader	1	Manual Pipe threader, ¼”-2”	1 set
	Adjustable wrench	4	Adjustable wrench, 150, 200, 300mm	4 sets
			Pipe wrench, 300, 500mm	4 sets
	Machinist hammer	1	--------	--------
	Steel rule	4	--------	--------
	Torque wrench	4	Torque wrench, 3-24	2 sets
			Pry bar (standard)	1 pc.
			Pipe vise (standard)	2 pcs.
			Oiler	2 pcs.
			Grease Gun	2 pcs.
			Thread Extractor (Standard)	5 sets
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Welding machine	3	-------	-------
	Power hacksaw	1	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
	Bar cutter	1	Bar cutter (standard)	1 unit
	Puncher	1	Puncher (standard)	1 unit

	Arbor press	1	Arbor press (standard)	1 unit
	Dollies	6	Dollies (standard)	6 units
	Bench shear	2	Bench shear (standard)	2 units
	Bench lathe	1	Bench lathe, chuck dia.-6 inches, bet. Center- 600, gear head, 220v, single, 60hz	1 unit
	Bench Miller	1	Vertical Milling machine #2 with complete accessories and attachment	1 unit
	Hand truck	2	Palette truck (standard)	2 units
	Electric welder	4	Electric Arc welding machine, 200 amperes, inverter type with complete accessories, 220v, 60hz	4 units
	Chain block, 5T		Chain block, 2T	1 unit
	Oxyfuel Cutting	4	Oxyfuel Cutting outfit with complete accessories	4 units
	Drill press	1	Bench Drill press, 0-13mm dia.	1 unit
	Bench grinder	1	Bench Grinder, twin head, 1/2hp	1 unit
	Forge	1	Forge (standard)	1 unit
	Welding table	4	Welding tables	4 units
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker cabinet 1.2mx 2m (6 doors)	5 units
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	First –Aid kit	3	First –Aid kit	3 pcs.
	Fire extinguisher	4	Fire extinguisher	4 pcs.
	Welding mask	4	Welding mask	4 pcs.
	Face shield	12	Face shield	12 pcs.
	Safety goggles	12	Safety goggles	12 pcs.
	Welding goggles	4	Welding goggles	4 pcs.
	Welding gloves	12	Welding gloves	12 pcs.
	Hand gloves	24	Hand gloves	24 pcs.
	Welding apron	4	Welding aprons	4 pcs.

	Solvents	1	Solvents	1 pc
	Kerosene	1	Kerosene	1 pc.
			Oxygen Gas	1 cyl
			Acetylene Gas/LPG	1 cyl
			Welding electrodes, 3mm dia. (sets)	1 lot
			Steel brush	12 pcs.
	Flat bar 6mm x 150 x 6000 mm	2	MS Flat bar 6mm x 150 x 6000 mm or equivalent	2 pcs.
	Steel sheet, 1.2mm1200x 2400	6	MS Steel sheet, 1.2mmx1220mmx 2440mm	6 pcs.
	Steel plate, 3mm x 1200 x 2400	6	MS Steel plate, 3mm x 1220mmx 2440mm	6 pcs.
			Hand Hacksaw Blade, 18TPI 300 mm length	2 boxes
			Cutting Oil	1 pail
			Lubricating Oil	1 pail
	Brooms	20	Brooms	20 pcs.
	Clean rags	10	Clean rags	10 pcs.
	Mops	10	Mops	10 pcs.
	Soap	2	Soap	2 pcs.
	Trash can	2	Trash can	2 pcs.
	Dustpan	5	Dustpan	5 pcs.
			Whiteboard marker Black, Blue and red color	3 boxes
	Cardboard	24	Cardboard	24 pcs.
	Cartolina	24	Cartolina	24 pcs.

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR	
Qualification :	PLANT MAINTENANCE NC I

Existing	Amended
PLANT MAINTENANCE NC I The Drafting workshop must be of concrete structure. Based on class size of 25 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:	No Amendments

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	10 M X 30 M		300 Sq. M
▪ Trainee working space	2 M X 2 M	4 Sq.M / trainee	100 sq. M.
▪ Lecture Room	8 M X 10 M	80 Sq. M.	80 Sq. M
▪ Learning Resource Center	4 M X 8 M.	32 Sq. M	32 Sq. M
▪ Facilities/ Equipment/ Circulation Area			88 Sq. M.

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR		
Qualification:	**PLANT MAINTENANCE NC I**	
Existing		**Amended**
• Must be a holder of Plant Maintenance NC I • Must have undergone training on Training Methodology I (TM I) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)		• Holder of National TVET Trainer Certificate (NTTC) Level I in Plant Maintenance NC I; • At least technology graduate related to Mechanical Engineering; and • Must have at least 3 years related industry experience or at least 5 years teaching experience and 240 hours relevant training

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
PRESS MACHINE OPERATION NC I	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Box wrench	2 sets	Combination box & open wrench (4 mm to 24 mm)	2 sets
	Adjustable wrench	2 sets	Adjustable wrench (200mm & 300mm)	2 sets
	Vice grip length175 mm	2 sets	Vice grip length175 mm	2 sets
	Open end wrench 4 mm to 20 mm	2 sets	-------	-------
	Flat screw driver length 140 & 160	2 set	Flat screw driver length 140 & 160	2 sets
	Allen wrench 4 to 10 mm	2 sets	Allen wrench 4 to 10 mm	2 sets
	Philips screw driver	2 sets	Philips screw driver	2 sets
	Steel rule	25 pcs	Steel rule (300mm)	25 pcs
			Oiler	2 pcs.
			Grease Gun	2 pcs.
	Feeler gauges	10 pcs.	Feeler gauges	1 set
			Thickness Gauge	1 set
			Scriber	2 pcs.
			Steel Square, 300mm	5 pcs.
			Steel Square, 200mm	5 pcs.
	Vernier caliper - Inside - outside	15 pcs.	Vernier caliper - 200mm - 300mm Standard with inside outside and depth measurement res0.02	 8 pcs. 7 pcs.
	Micrometer - inside - outside	15 pcs.	Micrometer, 0-25 mm, Res.0.01	5 pcs.
			Ball peen hammer, 0.3 kg or equivalent	5 pcs.
			Mallet (PU/rubber)	5 pcs.
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Mechanical press machine with accessories	1 unit	Mechanical press machine with accessories 30 TONS CAPACITY	1 unit

			15 TONS CAPACITY	4 units
	Compressor with accessories	1 unit	Compressor with accessories, 5HP complete with piping and FRL	1 unit
	Hoists	1 unit	Hoists, 1 ton	1 unit
	Jacks	1 unit	Jacks, 20 tons	1 unit
			Bench vise, 150 opening	1 unit
			Working bench	1 unit
			Clamp down	1 set per machine
			Electric manual nibbler	1 unit
			Tin snips, 300mm	1 unit
			Angle grinder, 100mm dia	1 unit
			Bench grinder, twin head, 1/2hp	1 unit
			Steel tape, 3m	5 pcs
			Straight edge, 1m	2 pcs
			File	1 set
	DIES		**DIES**	
	Blanking		Blanking	1 unit
	Cut-off		Cut-off	1 unit
	Piercing		Piercing	1 unit
	Trimming		Trimming	1 unit
	Bending		Bending	1 unit
	Drawing		Drawing	1 unit
	Extruding		Extruding	1 unit
	Compound		Compound	1 unit
	Progressive		Progressive	1 unit
	Forming		Forming	1 unit
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker cabinet 1.2mx 2m (6 doors)	5 units
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	First –Aid kit	1 box	First –Aid kit	1 box
	Fire extinguisher	4 cyl	Fire extinguisher	4 cyl

	Safety goggle	25 pcs	Safety goggle	25 pcs
	Safety shoes	25 pcs	Safety shoes	25 pcs
	Safety shield/mask	25 pcs	Safety shield/mask	25 pcs
	Gloves	25 pcs	Gloves	25 pcs
	Strip material		Strip material (Refer to type of die)	
			Cutting oil	1 pail
			Grease	1 liter
	Lubricating Oil		Lubricating Oil	1 pail
	Brooms	20 pcs	Brooms	20 pcs
	Scrapers	10 pcs	Scrapers	10 pcs
	Kerosene oil	10 gal	Kerosene oil	10 gal
	Clean rags	10 k	Clean rags	10 kg
	Mops	10 pcs	Mops	10 pcs
	Soap	2 bars	Soap	2 bars
	Dustpan	5 pcs	Dustpan	5 pcs
	Trash can	2 pcs.	Trash can	2 pcs.
			Whiteboard marker Black, Blue and red color	3 boxes
	Reference books		Reference books	1 lot
	Catalogs		Catalogs	1 set
	Brochures/ LEs		Brochures/ LEs	1 lot
	CDs/Videos tape		-------	-------

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR	
Qualification :	PRESS MACHINE OPERATION NC I

Existing	Amended
<table><tr><th>SPACE REQUIREMENT</th><th>SIZE IN METERS</th><th>AREA IN SQ. METERS</th><th>TOTAL AREA IN SQ. METERS</th></tr><tr><td>• Building (permanent)</td><td>10 M X 30 M</td><td></td><td>300 Sq. M</td></tr><tr><td>▪ Trainee working space</td><td>2 M X 2 M</td><td>4 Sq.M / trainee</td><td>100 sq. M.</td></tr><tr><td>▪ Lecture Room</td><td>8 M X 10 M</td><td>80 Sq. M.</td><td>80 Sq. M</td></tr><tr><td>▪ Learning Resource Center</td><td>4 M X 8 M.</td><td>32 Sq. M</td><td>32 Sq. M</td></tr><tr><td>▪ Facilities/ Equipment/ Circulation Area</td><td></td><td></td><td>88 Sq. M.</td></tr></table>	No Amendments

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**PRESS MACHINE OPERATION NC I**
Existing	**Amended**
• Must be a holder of PRESS MACHINE OPERATION NC I or its equivalent • Must have undergone training on Training Methodology I (TM I) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	• Holder of National TVET Trainer Certificate Level I (NTTC Level I) in Press Machine Operation NC I; • At least technology graduate related to Mechanical Engineering or Mechanical Designing; and • Must have at least 3 years' industry experience in: Machining and industry operations or at least 5 years teaching experience and 240 hours relevant training in Machining and Fabrication

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

METALS AND ENGINEERING SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Tools		**Tools**	
	Description	**Qty**	**Description**	**Qty**
TOOL AND DIE MAKING NC II	Working Bench	4	Working Bench	3 pcs.
	T-squares	12	T-squares	13 pcs.
	Triangles	12	Triangles	13 pcs.
	Protractor	12	Protractor	13 pcs.
	Ruler	12	Ruler	13 pcs.
	Scale Ruler 12 "	12	Scale Ruler 12 "	13 pcs.
	Compass	12	Compass	13 pcs.
	Drawing pencil	12	-------	-------
			Mechanical Pencil	13 pcs.
	Triangular scale	12	Triangular scale	13 pcs.
	Vernier caliper, 150	12	Vernier caliper, 150	13 pcs.
	Protractor	12 .	Protractor	13 pcs.
	Inside caliper	6	-------	-------
	Dial indicator, lever type	6	Dial indicator, lever type (Resolution – 0.01)	3 pcs.
	Vernier Height gage	1	Vernier Height gage	1 pc.
	Angle plate	2	Angle plate	2 pcs.
	Vernier caliper 200mm	6	Vernier caliper, 300mm	13 pcs.
	Outside caliper	6	-------	-------
	Dial indicator, plunger type		Dial indicator, plunger type	2 pcs.
	Bevel vernier protractor	3	Bevel vernier protractor	3 pcs.
	Cylindrical square	1	-------	-------
			Precision square, 150mm	6 pcs.
	Steel rule	6	Steel rule, 300mm	13 pcs.
	Micrometer 25- 50 mm	6	Micrometer 25- 50 mm, Resolution 0.1	6 pcs.
	Micrometer 50-75 mm	6	-------	-------
	Micrometer, 0-25 mm		Micrometer, 0-25 mm, Resolution 0.1	6 pcs.
	Gage block & accessories, workshop grade	1	Gage block & accessories, workshop grade (optional)	1 set
	Surface plate	1	Surface plate, 600x600, CI (minimum)	1 unit
	Dial indicator, plunger type		-------	-------
	Set of files	1	-------	-------

			Files, needle	3 sets
			Files, flat 200mm (medium cut)	13 pcs.
			Files, flat 200mm (fine cut)	13 pcs.
			Files, round 200mm (medium cut)	13 pcs.
			Files, round 200mm (fine cut)	13 pcs.
			Files, half round 200mm (medium cut)	1 set
			Files, half round 200mm (fine cut)	13 pcs.
			Files, triangular 200mm (medium cut)	13 pcs.
			Files, triangular 200mm (fine cut)	13 pcs.
			Files, square 200mm (medium cut)	13 pcs.
			Files, square 200mm (fine cut)	13 pcs.
			File card	13 pcs.
	Set Allen wrench	1	Allen wrench (3mm-12mm)	3 sets
	Scribers	1	Scribers	13 pcs.
	Vise with soft jaws	1	Vise with soft jaws	12 units
	Spotting screws	8	-------	-------
	Set of counterbores	1	Counterbore tool (9-20 mm)	1 set
	Mallets	6	PU Soft Mallets	13 pcs.
	Machinist hammer	6	Ball peen hammer, 300 grams	13 pcs.
	Angle vise	3	Angle vise	2 pcs.
			Machine vise, swivel type 150mm	2 pcs.
			Parallel bars, 12x25x150mm	6 pcs.
	Assorted shims	1	Assorted shims	1 set
	Angle plate	2	Angle plate	2 pcs.
	Vernier height gage	2	Vernier height gage, 300mm (res. 0.02)	2 pcs.
	Center punch	8	Center punch	13 pcs.
	Parallel clamps	6	Parallel clamps	6 pcs.
	Set of reamers	1	Fixed reamers 5-20mm	1 set
	Anvil	3	-------	-------
	Set of screwdrivers, flat	6	Screwdrivers, flat	1 set
			Screwdrivers, Phillips	1 set
	Set drill bits	1	Drill bits (3-12mm)	3 sets
	Set hand taps	1	Hand taps (M5-M12)	6 sets
	Set counter bore	1	-------	-------
	Portable electric drill	2	-------	-------
	Set of parallel set	4	-------	-------
	Set reamers	2	-------	-------

	Rose bits	6	-------	-------
	Set of open wrench	6	Combination (open & box) wrench, 6-32mm)	2 sets
	Set of box wrench	6	-------	-------
			Tap extractor	2 units
			C-clamp, 150mm	6 pcs.
			Scrapers	10 pcs
			Oiler	2 pcs.
			Grease Gun	2 pcs.
			Scrapers	10 pcs.
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Lathe	2	Lathe, swing over bed-150mm, between center-750mm, gear type headstock, chuck dia.-200mm, 4-jaw	4 units
	Horizontal Milling machine w/ DRO	2	Horizontal Universal Milling machine w/ DRO, Type 2	2 units
	Vertical Milling machine w/ DRO	2	Vertical Milling machine w/ DRO, Type 2 Swivel Head	6 units
	Surface Grinder	1	Surface Grinder w/ DRO, 300mm, auto feed w/ coolant	1 unit
	Bandsaw	1	Horizontal Bandsaw	1 unit
	Power Hacksaw	1	Power Hacksaw complete with accessories,1 hp motor, 220 v, single phase, 60 hz	1 unit
	Mechanical Press	1	Mechanical Press, 15 tons	1 unit
	Drill press	1	Bench Drill press, up to 13mm dia.	5 units
			Floor type drill press, up to 25mm	1 unit
			Portable electric drill	2 units
			Air-Conditioning unit, 2HP	2 units
			Audio-Visual Equipment	1 lot
			Industrial fan	2 units
			Dust Collector (Optional)	1 sys.
			Tool cabinets and Racks	1 lot
			Whiteboards with eraser	1 lot
			Table and Chairs	1 lot
			Locker cabinet 1.2mx 2m (6 doors)	5 units
			Exhaust Fan	2 units
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
			Cutting Oil	1 pail

			Lubricating Oil	1 pail
	Reference books		Reference books	1 lot
	Manuals		Manuals	6 pcs.
	Catalogs		Catalogs	set
	Brochures / LE s		Brochures / LE s	1 lot
	CD s / Video tape		-------	-------
			Bond paper (A3,A4)	1 lot
	Brooms	20 pcs	Brooms	5 pcs
	Scrapers	10 pcs	-------	-------
	Clean rags	10 k	Clean rags	10 kgs.
	Mops	10 pcs	Mops	5 pcs
	Soap	2 bars	Soap	2 bars
	Dustpan	5 pcs	Dustpan	5 pcs
	Trash can	2 pcs	Trash bins	3 pcs.
			PPEs	25 sets
			Paint brush	25 pcs.
			Sand papers, 150 grit	1 box
			Degreasers	1 gallon
			Fire extinguisher (ABC type)	4 units
			First aid kit	1 lot
			Printer ink	1 lot
			Whiteboard marker Black, Blue and red color	3 boxes

II. B - TRAINING FACILITIES (TF)

METALS AND ENGINEERING SECTOR

Qualification : TOOL AND DIE MAKING NC II

Existing

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	10 M X 30 M		300 Sq. M
▪ Trainee working space	2 M X 2 M	4 Sq.M / trainee	100 sq. M.
▪ Lecture Room	8 M X 10 M	80 Sq. M.	80 Sq. M
▪ Learning Resource Center	4 M X 8 M.	32 Sq. M	32 Sq. M
▪ Facilities/ Equipment/ Circulation Area			88 Sq. M.

Amended

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			330 Sq. M.
Trainee Working Space	2 M. x 2 M.	4 Sq. M / trainee	100 sq. M.
Lecture Room	8 M. x 10 M.	80 Sq. M.	80 Sq. M.
Learning Resource Center	4 M. x 8 M.	32 Sq. M.	32 Sq. M.
Facilities/ Equipment/ Circulation Area			120 Sq. M.

II. C – TRAINER'S QUALIFICATION (TQ)

METALS AND ENGINEERING SECTOR	
Qualification:	**TOOL AND DIE MAKING NC II**
Existing	**Amended**
• Must be a holder of Tool and Die Making NC II • Must have undergone training on Training Methodology II (TM II) • Must be computer literate • Must be physically and mentally fit • *Must have at least 2 years job/industry experience • Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)	• Must be a holder of National TVET Trainer Certificate Level I (NTTC Level I) in Tool and Die Making NC II; • At least technology graduate related to Mechanical Engineering; and • Must have at least 3 years industry experience in Tool and Die making and operations or at least 5 years teaching experience and 240 hours relevant training in Tool and Die Making and Fabrication

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
MICROFINANCE TECHNOLOGY NC II	Computer sets w/ MS office application software	30 sets	Computer set w/ MS office application software	30 sets
	Laptop computer	1 unit	Laptop computer	1 unit
	Wireless G Router, up to 54Mbps	1 unit	Wireless G Router, up to 54Mbps	1 unit
	Calculator, hand-held type	30 pcs	Calculator, hand-held type	30 pcs
	Mechanical typewriter, portable type	15 units	---	
	Multimedia projector	2 units	Multimedia projector	2 units
	Projection screen	2 units	Projection screen	2 units
	Laser pointer	2 pcs	Laser pointer	2 pcs
	Printer, deskjet	2 units	Printer, deskjet	2 units
	Printer, laserjet	2 units	Printer, laserjet	2 units
	Scanner	2 units	Scanner	2 units
	Fax machine	2 units	---	
	Photocopier, heavy duty-type	1 unit	Photocopier, heavy duty-type	1 unit
	Colored television 24-inch	1 unit	Audio visual equipment including sound system	1 set
	DVD player recorder	1 unit		
	Karaoke set with AM/FM, cassette & CD/DVD players, with 2 microphones	1 unit		
	Lapel microphone w/ receiver/transmitter	1 unit		
	Telephones with 2 external lines	2 sets	Mobile phones	2 units
	Storage Device, USB flash drives	30 pcs	Storage Device, USB flash drives	30 pcs
	Storage device, CD-R optical drives	30 pcs	---	
	Stapler, big size	1 pc.	Stapler, big size	1 pc.
	Masking/scotch tape dispenser	1 pc.	Masking/scotch tape dispenser	1 pc.
	Money Detector	1 unit	Money Detector	1 unit
	Magnet, U-type or bar-type	10 pcs	Magnet, U-type or bar-type	10 pcs
	Magnifier, hand-held	10 pcs	Magnifier, hand-held	10 pcs
	White board 4ft x 8ft, wall-mounted	2 units	White board 4ft x 8ft, wall-mounted	2 units

	White board 4ft x 4ft, portable w/ wheels	1 unit	White board 4ft x 4ft, portable w/ wheels	1 unit
	Armchair with steel framing, fiberglass sit & backrest	30 units	Armchairs	30 units
	Computer table good for 2 units per table, wooden	15 units	Computer table good for 2 units per table, wooden	15 units
	Computer workstation, single-type w/ metal framing	2 units	Computer workstation, single-type w/ metal framing	2 units
	Office chairs for computer laboratory	30 units	Office chairs for computer laboratory	30 units
	Teacher's table w/ office chair w/ rollers	2 sets	Teacher's table w/ office chair w/ rollers	2 sets
	Office wooden table w/ office chair w/ rollers	2 sets	Office wooden table w/ office chair w/ rollers	2 sets
	Steel filing cabinet, 4-layer type	2 units	Steel filing cabinet, 4-layer type	2 units
	Supplies and Materials		**Supplies and Materials**	
	Description	**Qty**	**Description**	**Qty**
	Bond papers, short size	5 reams	Bond papers, short size	5 reams
	Bond papers, A4 size	5 reams	Bond papers, A4 size	5 reams
	Thermal paper for fax machine	2 rolls	---	
	Printer inkjet print cartridge, black	12 pcs	Printer inkjet print cartridge, black	12 pcs
	Printer inkjet print cartridge, colored	4 pcs	Printer inkjet print cartridge, colored	4 pcs
	Printer toner	2 pcs	Printer toner	2 pcs
	Meta plan cards, assorted colors	300 pcs	Meta plan cards, assorted colors	300 pcs
	Masking tape 1-inch width	2 rolls	Masking tape 1-inch width	2 rolls
	Scotch tape 1-inch width	2 rolls	Scotch tape 1-inch width	2 rolls
	Whiteboard markers: black, blue, red & green	8 pcs	Whiteboard markers: black, blue, red & green	8 pcs
	Board eraser	2 pcs	White board eraser	2 pcs
	Staple wires, No.35 (5,000 wires per box)	1 box	Staple wires, No.35 (5,000 wires per box)	1 box
	Manila Paper	50 sheets	Manila Paper	50 sheets
	Permanent markers: black, blue, & red	15 pcs	Permanent markers: black, blue, & red	15 pcs
	Ruler 12 inches	15 pcs	Ruler 12 inches	15 pcs
	Ballpen: black & red	60 pcs	Ballpen: black & red	60 pcs
	Folders, long size	60 pcs	Folders, long size	60 pcs
	Envelope, short size	60 pcs	Envelope, short size	60 pcs
	MFI Operational Handbook/Manual	2 sets	MFI Operational Handbook/Manual	2 sets
	Office Forms/Documents		**Office Forms/Documents**	
	Description	**Qty**	**Description**	**Qty**

	Deposit slips	100 pcs	Deposit slips	100 pcs
	Denomination slips	100 pcs	Denomination slips	100 pcs
	Official Receipts	200 pcs	Official Receipts	200 pcs
	Debit voucher	100 pcs	Debit voucher	100 pcs
	General/Subsidiary Ledger	31 pcs	General/Subsidiary Ledger	31 pcs
	Loan application sheets	500 pcs	Loan application sheets	500 pcs
	Location Map	15 pcs	Location Map	15 pcs
	Survey questionnaires and interview guides	500 pcs	Survey questionnaires and interview guides	500 pcs
	Logbook/class record	30 pcs	Logbook/class record	30 pcs
	Forms (Collection report forms, , insurance form and other standard forms)	200 pcs	Forms (Collection report forms, insurance form and other standard forms)	200 pcs
	Bible (Old and New Testaments, handy size), and other inspirational reading materials	31 pcs	Bible (Old and New Testaments, handy size), and other inspirational reading materials	31 pcs
	Promotional materials (flyers, posters, brochures, streamers)	500 pcs	Promotional materials (flyers, posters, brochures, streamers)	500 pcs

II. B - TRAINING FACILITIES (TF)

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR	
Qualification :	**MICROFINANCE TECHNOLOGY NC II**

Existing	Amended
The microfinance training venue must be concrete structure. Based on class size of 30 students/trainees the space requirements for the teaching/learning and circulation areas are as follows: **3.5 TRAINING FACILITIES** **MICROFINANCE TECHNOLOGY - NC II** The microfinance training venue must be concrete structure. Based on class size of 30 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:	No Amendments

TEACHING/ LEARNING AREAS	SIZE (in meter)	AREA (in sq. meters)	TOTAL AREA (in sq. meters)
• Lecture area	6 x 8	48	48
• Computer room	7 x 8	56	56
• Virtual office	4 x 5	20	20
• Learning resources/storage	5 x 7	35	35
• Wash room	2 x 5	10x2	20
• Circulation area **		54	54
		Total Floor Area	**233**

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

II. C – TRAINER'S QUALIFICATION (TQ)

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR	
Qualification:	**MICROFINANCE TECHNOLOGY NC II**
Existing	**Amended**
▪ Must be a holder of Microfinance Technology NC II; ▪ Must have undergone training on Training Methodology II (TM II) 1 ▪ Must be computer literate; ▪ Must be physically and mentally fit; ▪ With good moral character; ▪ Have good communication skills; ▪ Must be a holder of B.S. in Business Administration, B.S. in Accountancy or any related course; * ▪ Must have passed appropriate Civil Service eligibility (for government training institutions) * ▪ Preferably having 18 education units * 1 This shall be changed to "Must be a holder of Trainer Qualification Level II (TQ II) or equivalent "upon promulgation by the TESDA Board of the TQ/AQ training regulations *Optional. Only when required by the hiring institution	▪ Must be a holder of National TVET Trainers Certificate (NTTC) Level I in Microfinance Technology NC II; ▪ Must be a holder of B.S. in Business Administration, or B.S. in Accountancy or any related course; ▪ Preferably have 18 education units * ▪ Preferably with 2-year experience in Microfinance Operations * *Optional. Only when required by the hiring institution

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
MICROFINANCE TECHNOLOGY NC IV	**Equipment and Furnitures**		**Equipment and Furnitures**	
	Description	**Qty**	**Description**	**Qty**
	Calculator	30 pcs	Calculator	30 pcs
	Computer sets w/ MS office application software	30 sets	Computer sets w/ MS office application software	30 sets
	Computer Printer, desk jet/laser jet	2 units	Printer, desk jet/laser jet	2 units
	Internet connection devices	2 units	Internet connection devices	2 units
	Monitor radiation barrier/filter	30 pcs	---	
	Laptop computer	1 unit	Laptop computer	1 unit
	Wireless G Router, up to 54Mbps	2 units	Wireless G Router, up to 54Mbps	2 units
	Multimedia projector	2 units	Multimedia projector	2 units
	Mechanical/Laser pointer	1 unit	Mechanical/Laser pointer	1 unit
	Fax machine	2 units	---	
	Telephones with 2 external lines	2 sets	Mobile phone	2 units
	White board/Chalk board, 4ft x 8ft, wall-mounted	2 units	White board/Chalk board, 4ft x 8ft, wall-mounted	2 units
	White board/Chalk board, 4ft x 4ft, portable w/ wheels	1 unit	White board/Chalk board, 4ft x 4ft, portable w/ wheels	1 unit
	Stapler and staple remover, big	2 pcs	Stapler and staple remover, big	2 pcs
	Masking/scotch tape dispenser	2 pcs	Masking/scotch tape dispenser	2 pcs
	Scissors	2 pcs	Scissors	2 pcs
	Cutter, big	2 pcs	Cutter, big	2 pcs
	Filing cabinet and shelves, 4-layer type	2 units	Filing cabinet and shelves, 4-layer type	2 units
	CD/DVD player	1 unit	---	
	Projection screen	2 units	Projection screen	2 units
	Laser pointer	2 pcs	Laser pointer	2 pcs
	Scanner	2 units	Scanner	2 units
	Photocopier, heavy duty-type	1 unit	Photocopier, heavy duty-type	1 unit
	Colored television 24-inch	1 unit	Audio visual equipment with sound system	1 set
	Karaoke set with AM/FM, cassette & CD/DVD players, with 2 microphones	1 unit		
	Lapel microphone w/ receiver/transmitter	1 unit		
	Storage Device, USB flash drives	30 pcs	Storage Device, USB flash drives	30 pcs

	Storage device, CD-R optical drives	30 pcs	---	
	Money Detector	1 unit	Money Detector	1 unit
	Magnet, U-type or bar-type	15 pcs	Magnet, U-type or bar-type	15 pcs
	Magnifier, hand-held	15 pcs	Magnifier, hand-held	15 pcs
	Armchair with steel framing, fiberglass sit & backrest	30 units	Armchair	30 units
	Computer table good for 2 units per table, wooden	15 units	Computer table good for 2 units per table, wooden	15 units
	Computer workstation, single-type w/ metal framing	2 units	Computer workstation, single-type w/ metal framing	2 units
	Office chairs for computer laboratory	30 units	Office chairs for computer laboratory	30 units
	Teacher's table w/ office chair w/ rollers	2 sets	Teacher's table w/ office chair w/ rollers	2 sets
	Office wooden table w/ office chair w/ rollers	2 sets	Office wooden table w/ office chair w/ rollers	2 sets
	Supplies and Materials		**Supplies and Materials**	
	Description	**Qty**	**Description**	**Qty**
	Bond papers, short size	5 reams	Bond papers, short size	5 reams
	Bond papers, A4 size	5 reams	Bond papers, A4 size	5 reams
	Meta plan cards, assorted colors	300 pcs	Meta plan cards, assorted colors	300 pcs
	Masking tape 1-inch width	2 rolls	Masking tape 1-inch width	2 rolls
	Permanent markers: black, blue, & red	15 pcs	Permanent markers: black, blue, & red	15 pcs
	Whiteboard markers: black, blue, red & green	8 pcs	Whiteboard markers: black, blue, red & green	8 pcs
	Board eraser	2 pcs	Whiteboard eraser	2 pcs
	Manila Paper	50 sheets	Manila Paper	50 sheets
	Envelope, short size	60 pcs	Envelope, short size	60 pcs
	Folders, long size	60 pcs	Folders, long size	60 pcs
	Paper Clips, Small	5 boxes	Paper Clips, small	5 boxes
	Fastener, Plastic	2 boxes	Fastener, plastic	2 boxes
	Thumbtacks	2 boxes	Thumbtacks	2 boxes
	Notebooks	10 pcs	Notebooks	10 pcs
	Pencil	2 boxes	Pencil	2 boxes
	Pencil Eraser	2 pcs	Pencil Eraser	2 pcs
	Staple wires, No.35 (5,000 wires per box)	1 box	Staple wires, No.35 (5,000 wires per box)	1 box
	Printer inkjet print cartridge, black	12 pcs	Printer inkjet print cartridge, black	12 pcs
	Printer inkjet print cartridge, colored	4 pcs	Printer inkjet print cartridge, colored	4 pcs
	Printer toner	2 pcs	Printer toner	2 pcs

	CD/DVD	1 box	---	
	USB, 16 Gigabytes	1 pc	USB, 16 Gigabytes	1 pc
	Thermal paper for fax machine	2 rolls	---	
	Scotch tape 1-inch width	2 rolls	Scotch tape, 1-inch width	2 rolls
	Ruler 12 inches	30 pcs	Ruler 12 inches	30 pcs
	Ballpen, Black	30 pcs	Ballpen, Black	30 pcs
	Ball, Red	30 pcs	Ballpen, Red	30 pcs
	Slips, Forms and Documents		**Slips, Forms and Documents**	
	Description	**Qty**	**Description**	**Qty**
	Loan Proposal Forms and Attachments	25 pcs	Loan Proposal Forms and Attachments	25 pcs
	Loan Disbursement Master Roll	25 pcs	Loan Disbursement Master Roll	25 pcs
	Management Information System data	25 pcs	Management Information System data	25 pcs
	Brochure of products and services	25 pcs	Brochure of products and services	25 pcs
	Deposit slips	25 pcs	Deposit slips	25 pcs
	Denomination slips	25 pcs	Denomination slips	25 pcs
	Official Receipts	200 pcs	Official Receipts	200 pcs
	Debit voucher	25 pcs	Debit voucher	25 pcs
	General/Subsidiary Ledger	25 pcs	General/Subsidiary Ledger	25 pcs
	Loan application sheets	25 pcs	Loan application sheets	25 pcs
	Location Map	5 pcs	Location Map	5 pcs
	Survey instruments and interview guides	25 pcs	Survey instruments and interview guides	25 pcs
	Logbook/class record	25 pcs	Logbook/class record	25 pcs
	Forms (Collection report forms, insurance form, membership application, performance evaluation form and other standard forms)	25 pcs	Forms (Collection report forms, insurance form, membership application, performance evaluation form and other standard forms)	25 pcs
	Bible (Old and New Testaments, handy size), and other inspirational reading materials	25 pcs	Bible (Old and New Testaments, handy size), and other inspirational reading materials	25 pcs
	Promotional materials (flyers, posters, streamers, brochure of products and services)	25 pcs	Promotional materials (flyers, posters, streamers, brochure of products and services)	25 pcs
	Training Manuals/References		**Training Manuals/References**	
	Description	**Qty**	**Description**	**Qty**
	Philippine Labor Code	5 sets	Philippine Labor Code	5 sets
	LGU Standard Operation Procedure	5 sets	LGU Standard Operation Procedure	5 sets
	OHS and Environmental Procedure	5 sets	OHS and Environmental Procedure	5 sets

	Business Correspondence	5 sets	Business Correspondence	5 sets
	MFI Operational (Policies and Procedures) Handbook/Manual	5 sets	MFI Operational (Policies and Procedures) Handbook/Manual	5 sets
	Products and Services Policy Manual	5 sets	Products and Services Policy Manual	5 sets
	Supervisory Management Book/Manual	5 sets	Supervisory Management Book/Manual	5 sets
	MFI Code of Ethics/Conduct and Discipline	5 sets	MFI Code of Ethics/Conduct and Discipline	5 sets
	Portfolio	5 sets	Portfolio	5 sets
	Written commendation	25 sets	Written commendation	25 sets
	Management Plan	25 sets	Management Plan	25 sets
	Management Report	25 sets	Management Report	25 sets
	Project/Business Proposal	25 sets	Project/Business Proposal	25 sets
	Learning Packages (Learning Modules)	25 sets	Learning Packages (Learning Modules)	25 sets
	Collection Report	25 sets	Collection Report	25 sets
	Aging of Delinquent Account	25 sets	Aging of Delinquent Account	25 sets

II. B - TRAINING FACILITIES (TF)

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR	
Qualification :	**MICROFINANCE TECHNOLOGY NC IV**

<table>
<tr><th>Existing</th><th>Amended</th></tr>
<tr><td>
The microfinance training venue must be concrete structure. Based on class size of 30 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:

<table>
<tr><th>TEACHING/ LEARNING AREAS</th><th>SIZE (in meter)</th><th>AREA (in sq. meters)</th><th>TOTAL AREA (in sq. meters)</th></tr>
<tr><td>• Lecture area</td><td>6 x 8</td><td>48</td><td>48</td></tr>
<tr><td>• Computer room</td><td>7 x 8</td><td>56</td><td>56</td></tr>
<tr><td>• Virtual office</td><td>4 x 5</td><td>20</td><td>20</td></tr>
<tr><td>• Learning resources/storage</td><td>5 x 7</td><td>35</td><td>35</td></tr>
<tr><td>• Wash room</td><td>2 x 5</td><td>10x2</td><td>20</td></tr>
<tr><td>• Circulation area **</td><td></td><td>54</td><td>54</td></tr>
<tr><td></td><td></td><td>Total Floor Area</td><td>233</td></tr>
</table>

*** Area requirement is equivalent to 30% of the total teaching learning areas*
</td><td>No Amendments</td></tr>
</table>

II. C – TRAINER'S QUALIFICATION (TQ)

SOCIAL AND OTHER COMMUNITY DEVELOPMENT SERVICES SECTOR	
Qualification:	**MICROFINANCE TECHNOLOGY NC IV**
Existing	**Amended**
▪ Must be a holder of Microfinance Technology NC II; ▪ Must have undergone training on Training Methodology II (TM II) 1 ▪ Must be computer literate; ▪ Must be physically and mentally fit; ▪ With good moral character; ▪ Have good communication skills; ▪ Must be a holder of B.S. in Business Administration, B.S. in Accountancy or any related course; * ▪ Must have passed appropriate Civil Service eligibility (for government training institutions) * ▪ Preferably having 18 education units * [1] This shall be changed to "Must be a holder of Trainer Qualification Level II (TQ II) or equivalent "upon promulgation by the TESDA Board of the TQ/AQ training regulations *Optional. Only when required by the hiring institution	▪ Must be a holder of National TVET Trainers Certificate (NTTC) Level I in Microfinance Technology NC IV; ▪ Must be a holder of B.S. in Business Administration, or B.S. in Accountancy or any related course; ▪ Preferably have 18 education units * ▪ Preferably with 2-year Managerial experience in Microfinance Operations * *Optional. Only when required by the hiring institution

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

UTILITIES SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
GARBAGE COLLECTION NC I	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Dust Masks	25	Dust Mask	25 pcs
	Boots (rubber)	25	Boots (rubber)	25 pairs
	Steel soled/toe shoe	5 pairs	Steel soled/toe shoe	5 pairs
	Goggles (clear)	25	Goggles (clear)	25 pcs
	Hardhats	25	Hardhat	25 pcs
	Waste picking sticks	25	Waste picking stick	25 pcs
	Sacks (plastic garbage sack)	25	Sack (plastic garbage sack)	25 pcs
	Shovels	8	Shovel	8 pcs
	Gloves (rubber padded)	25	Gloves (rubber padded)	25 pairs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Fire Extinguishers	1 unit	Fire Extinguisher	1 unit
	Laptop	1	Laptop	1 unit
	Projector Screen	1	Projector Screen	1 unit
	LCD	1	LCD Projector	1 unit
	Sound System (microphone, speakers, amplifier)	1	Sound System (microphone, speakers, amplifier)	1 unit
	Mock-up of a garbage truck (2.5 m x 2m)	1 unit	Mock-up of a garbage truck (2.5 m x 2m)	1 unit
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Marking Pens	5	Marking Pen	5 pcs
	White Boards/Blackboard	2	White Board/Blackboard	2 pcs
	Whiteboard Markers/Chalk	3	Whiteboard Marker/Chalk	3 pcs
	Whiteboard Erasers	2	Whiteboard Eraser	2 pcs
	Brown paper (Easel Sheet)	1 roll	Brown paper (Easel Sheet)	1 roll
	1" masking tape	2 rolls	1" masking tape	2 rolls
	Waste classification gallery	1 set	Waste classification gallery	1 set
			Surgical Mask	1 box
			Surgical Gloves	1 box
			Face Shield*	
			Alcohol/Sanitizer	1 bottle
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**

	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs
	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs
	Handouts	15 pcs	Handouts	15 pcs
	Audio visual materials on compactors	15 pcs	Audio visual materials on compactors	15 pcs
	Company Work Process & Standards	15 pcs	Company Work Process & Standards	15 pcs
	Municipality National Solid Waste Management Commission Resolution No., series no.	15 pcs	Municipality National Solid Waste Management Commission Resolution No., series no.	15 pcs

*To be brought by the candidate

II. B - TRAINING FACILITIES (TF)

UTILITIES SECTOR	
Qualification :	GARBAGE COLLECTION NC I

<table>
<tr><th>Existing</th><th>Amended</th></tr>
<tr><td>

3.5 TRAINING FACILITIES

The areas indicated here are indicative for a class size of 25 trainees. For a smaller class size, they may be reduced, provided that there should be at least 1.0 sq. m. or more space per trainee.

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Lecture Area	8 x 5 m	40 sq. meter	40 sq. meter
Learning Resource Area	8x5 m	40 sq. meter	40 sq. meter
Facilities/Equipment/Circulation Area			30 sq. meter
		Total workshop area	110 sq. meter

*The training provider may partner with a solid waste company for access to dumpsite facilities and garbage truck equipment.

</td><td>No Amendments</td></tr>
</table>

II. C – TRAINER'S QUALIFICATION (TQ)

UTILITIES SECTOR	
Qualification:	**GARBAGE COLLECTION NC I**
Existing	**Amended**
▪ Must be a holder of NTTC Level I in SPOTTER NC II; ▪ Must be able to communicate in Filipino/vernacular; ▪ Must have at least 2 years relevant waste management industry experience preferably in waste collection and hauling and/or; ▪ Must have attended relevant training and seminars on waste collection and hauling	▪ Must be a holder of National TVET Trainers Certificate (NTTC) Level I in Sanitary Landfill Operations NC II; ▪ Must be able to communicate in Filipino/vernacular; ▪ Must have at least 2 years relevant waste management industry experience preferably in waste collection and hauling and/or have attended relevant training and seminars on waste collection and hauling

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

UTILITIES SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
SANITARY LANDFILL OPERATIONS NC II	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Dust Mask	25	Dust Mask	25 pcs
	Rubber Boots	15	Rubber Boots	15 pairs
	Hardhats	15	Hardhat	15 pcs
	Cotton Gloves	25	Cotton Gloves	25 pairs
	Safety Goggles	15	Safety Goggles	15 pcs
	Reflectorized Vest	15	Reflectorized Vest	15 pcs
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Fire Extinguishers	1 unit	Fire Extinguisher	1 unit
	Laptop	1	Laptop	1 unit
	Projector Screen	1	Projector Screen	1 unit
	Multimedia Equipment	1	LCD Projector	1 set
	Sound System	1	Sound System (microphone, speakers, amplifier)	1 set
	Computer hardware + software	1 set	Computer hardware + software	1 set
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Folders	25	Folder	25 pcs
	Marking Pens	5	Marking Pen	5 pcs
	White Boards/Blackboard	2	White Board/Blackboard	2 pcs
	Whiteboard Markers/Chalk	3	Whiteboard Marker/Chalk	3 pcs
	Whiteboard Erasers/Blackboard Erasers	2	Whiteboard Eraser/Blackboard Eraser	2 pcs
	Marking Pens	5	Marking Pens	5 pcs
	Ballpens	25	Ballpens	25 pcs
	Table top working model of an SLF that demonstrates actual movement of miniature eqpt, waste and waste product	1 set	Table top working model of an SLF that demonstrates actual movement of miniature eqpt, waste and waste product	1 set
	Waste Character gallery	1 set	Waste Character gallery	1 set
	Materials gallery for SLF construction	1 set	Materials gallery for SLF construction	1 set
			Surgical Mask	1 box
			Surgical Gloves	1 box
			Face Shield*	

			Alcohol/Sanitizer	1 bottle
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**
	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs
	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs
	RA 8749 Clean Air Act	15 pcs	RA 8749 Clean Air Act	15 pcs
	RA 9275 Clean Water Act	15 pcs	RA 9275 Clean Water Act	15 pcs
	EIA EO	15 pcs	EIA EO	15 pcs
	PD 1586	15 pcs	PD 1586	15 pcs
	WACS Training Modules	15 pcs	WACS Training Modules	15 pcs
	SLF Operations Manual	15 pcs	SLF Operations Manual	15 pcs
	Environmental Compliance Certificate	15 pcs	Environmental Compliance Certificate	15 pcs
	Handouts/ Popsheets	15 pcs	Handouts/ Popsheets	15 pcs

*To be brought by the candidate

II. B - TRAINING FACILITIES (TF)

UTILITIES SECTOR	
Qualification :	SANITARY LANDFILL OPERATIONS NC II

<table>
<tr><th>Existing</th><th>Amended</th></tr>
<tr><td>

3.5 TRAINING FACILITIES

Based on a class intake of 25 students/trainees

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Lecture Area	8 x 5 m	40 sq meter	40 sq meter
Learning Resource Area	8x5 m	40 sq. meter	40 sq meter
Facilities/Equipment/Circulation Area			30 sq. meter
SLF(own or access to)	Category 3 (min)	(per DENR approved design)	(per DENR approved design)
		Total workshop area	110 ++sq. meter
Lecture Area	8 x 5 m	40 sq meter	40 sq meter

**The training center has the option to partner with an SLF facility with ECC.

</td><td>No Amendments</td></tr>
</table>

II. C – TRAINER'S QUALIFICATION (TQ)

UTILITIES SECTOR	
Qualification:	**SANITARY LANDFILL OPERATIONS NC II**
Existing	**Amended**
▪ Holder of NTTC Level I in Sanitary Landfill Operations NC II ▪ Must be able to communicate in English and Filipino/vernacular; ▪ Must have at least 5 years relevant SLF industry experience; and ▪ Must have attended relevant training and seminars on SLF operations	▪ Must be a Holder of National TVET Trainers Certificate (NTTC) Level I in Sanitary Landfill Operations NC II; ▪ Must be able to communicate in English and Filipino/vernacular; ▪ Must have at least 5 years relevant SLF industry experience; and ▪ Must have attended relevant training and seminars on SLF operations

II. A - LIST OF TOOLS, EQUIPMENT AND MATERIALS

UTILITIES SECTOR				
Qualification	**Existing TEM**		**Amended TEM**	
SANITARY LANDFILL OPERATIONS NC III	**Tools**		**Tools**	
	Description	**Qty**	**Description**	**Qty**
	Mask (surgical)	25	Face mask (surgical)	25 pcs
	Safety shoes (steel-toe/sole)*	1	Safety shoes (steel-toe/sole)*	1 pair
	Hardhats	25	Hardhat	25 pcs
	Clothe Gloves with rubber linings	25	Clothe Gloves with rubber lining	25 pairs
	PPE Mask	1	PPE Mask	1 pc
	Equipment		**Equipment**	
	Description	**Qty**	**Description**	**Qty**
	Fire Extinguishers	1 unit	Fire Extinguisher	1 unit
	Laptop	1	Laptop	1 unit
	Projector Screen	1	Projector Screen	1 unit
	Multimedia Equipment	1	LCD Projector	1 set
	Sound System	1	Sound System (microphone, speakers, amplifier)	1 set
	Materials		**Materials**	
	Description	**Qty**	**Description**	**Qty**
	Marking Pens	5 pcs	Marking Pen	5 pcs
	White Boards/Blackboard	2 pcs	White Board/Blackboard	2 pcs
	Whiteboard Markers/Chalk	3 pcs	Whiteboard Marker/Chalk	3 pcs
	Whiteboard Erasers/Blackboard Erasers	2 pcs	Whiteboard Eraser/Blackboard Eraser	2 pcs
	Waste Character gallery	1 set	Waste Classification gallery	1 set
	Scale model/cross-section SLF in 4 categories	1 set	Scale model/cross-section SLF in 4 categories	1 set
			Surgical Gloves	1 box
			Face Shield*	
			Alcohol/Sanitizer	1 bottle
	Training Materials		**Training Materials**	
	Description	**Qty**	**Description**	**Qty**
	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs	Republic Act 9003 –Ecological Solid Waste Management Act of 2000	15 pcs
	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs	Republic Act 6969 – Toxic and Hazardous Waste	15 pcs
	Technical Guidebook on Solid Wastes Disposal Design Operation & Management	15 pcs	Technical Guidebook on Solid Wastes Disposal Design Operation & Management	15 pcs

	Guidebook for Safe Closure of Disposal Sites	15 pcs	Guidebook for Safe Closure of Disposal Sites	15 pcs
	SLF Operations Manual	15 pcs	SLF Operations Manual	15 pcs
	Handouts/ Pop sheets	15 pcs	Handouts/ Pop sheets	15 pcs

*To be brought by the candidate

II. B - TRAINING FACILITIES (TF)

UTILITIES SECTOR	
Qualification :	SANITARY LANDFILL OPERATIONS NC III

Existing	Amended
3.5 TRAINING FACILITIES The areas indicated here are indicative for a class size of 25 students/trainees. For a smaller class size, they may be reduced, provided that there should be at least 1.0 sq. m. or more space per trainee.	No Amendments

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Lecture Area	8 x 5 m	40 sq. meter	40 sq. meter
Learning Resource Area	8x5 m	40 sq. meter	40 sq. meter
Facilities/Equipment/Circulation Area			30 sq. meter
SLF(own or access to)	Category 3 (min)	(per DENR approved design)	(per DENR approved design)
Wash Area			30 sq. meter
		Total workshop area	140 ++sq. meter

II. C – TRAINER'S QUALIFICATION (TQ)

UTILITIES SECTOR	
Qualification:	**SANITARY LANDFILL OPERATIONS NC III**
Existing	**Amended**
▪ Must be a holder of NTTC Level I in Sanitary Landfill Operations NC III ▪ Must be able to communicate in English and Filipino/vernacular; ▪ Must have at least 3-5 years relevant SLF industry experience; and ▪ Must have attended relevant training and seminars on SLF operations	▪ Must be a holder of National TVET Trainers Certificate (NTTC) Level I in Sanitary Landfill Operations NC III; ▪ Must be able to communicate in English and Filipino/vernacular; ▪ Must have at least 3-5 years relevant SLF industry experience; and ▪ Must have attended relevant training and seminars on SLF operations