Republic of Rwanda
Ministry of Education

RTB | RWANDA TVET BOARD



RQF LEVEL

4

TVET CERTIFICATE IV
in
Automobile Technology

TRLAUT4001

Kigali, May,2023

Republic of Rwanda
Ministry of Education

TVET CERTIFICATE IV
in
Automobile Technology

Supported by

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Copies available from:

Rwanda TVET Board (RTB)

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P.O. Box: 4940 Kigali, Rwanda

Original published version updated:

May 2023

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P.O. Box : 4940 Kigali, Rwanda

Acknowledgments

RwandaTVET Board (RTB) wishes to extend its gratitude to the following partners, stakeholders and institutions involved in development of this programme including private sector, government institutions and other professionals. Particularly, RTB owe gratitude to Swiss Agency for Development and Cooperation (SDC) through Swisscontact for their technical and financial support.

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3.	DUSHIMIMANA Jean Baptiste	Gacuriro TSS	TVET Trainer
4.	TWIZERE Janvier	ETAG	TVET Trainer
5.	HAKIZIMANA Jean Paul	Auto-Junior Garage	Managing Director
6.	MWISENEZA Theo Albert	Nyanza Motor Vehicle Workshop Garage	Managing Director
7.	DUKUZIMANA Honorine	ATECAR	Technician
8.	UWIMANA Jean De Dieu	MEDECAR Garage	Mechanic
9.	UWINEZA Julienne	Honest Company	Auto technician
10.	Eng. MUTSINDASHYAKA Jean Baptiste	Computerized Car Garage	Production & Maintenance Engineer
11.	MBONIGABA Innocent	SJI company	Technical Director
12.	MUTUYIMANA Jean Pierre	UR/CST	Assistant Lecturer
13.	SIBOMANA Moise	Prime ciment	Mechanic
14.	NIYISHOBORABYOSE Seraphin	SJI Company	Mechanic
15.	MOGGA Hirally	NYANZA TSS	Trainer

2. General modules

N0	**Names**	**Organization**	**Position**
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2	MUNYANEZA Alphonse	CFJ BENEBIKIRA Ngarama TVET school	Trainer
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4	UFITINEMA Bonaventure	GSNDP Cyanika	Trainer
6	HARELIMANA Wilson	Nyanza TSS	Trainer
7	SINABAJIJE Alphonse	Nyamasheke District	DDE
8	UWITIJE Pierre Damien	UR/CST	Lecturer

9	UWAYEZU Jean Claude	IPRC GISHARI	Assistant Lecturer
10	NIYODUSENGA Patrick	ESN Nyanza	Trainer
11	NTABWOBA Felix	Ecole Technic Saint Kizito	Trainer
12	KARUHANGA Benon	New Life Christian Academy-Kayonza	Trainer
13	NTASHAMAJE Aimable	St Kizito Save TSS	Trainer
14	MWANANGU Theophile	Kirehe District	DDE
15	MUNEZERO Wivine	EFA Nyagahanga	Trainer
16	NSANZIMANA Jean Baptiste	Kayenzi TSS	Trainer
17	NDIKUMANA Dieudonee	GSNDP Cyanika	Trainer
18	UWITONZE Nestor	UR Chemistry Trainer	Lecturer
19	NYIRIMANZI Philemon	Kabutare TSS	Trainer
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21	NIRAGIRE Robert	DDE Karongi	Lecturer
22	UFITINEMA J. Chrisotome	UR	Lecturer
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28	NSABIMANA Rene David	Nyabikenke TSS	DOS

3. Complementary modules

#	Names	Institution	Position
1	MURWANASHYAKA Abel	GSNDP CYANIKA	Trainer
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3	HABAGUSENGA Louis	IPRC Kigali	Assistsnt Lecturer
4	UWIRAGIYE Antoinette	MPANDA TSS	Trainer
5	DUSABEMARIYA Francine	IPRC Kigali	Assistsnt Lecturer
6	NGABONZIZA Francois Xavier	Lycee Catholique St Alain Mataba	Trainer

7	NDAHAYO Jacques	Nyanza TSS	Trainer
8	MUSHIMIYIMANA Chantal	SJIP NYAMIRAMBO	Trainer
9	AKINGENEYE Angelique	ACEJ KARAMA	Trainer
10	TUYISHIME Henry	MUSHA ADVENTIST TECHNICAL COLLEGE	Trainer
11	MUHAYIMANA Theoneste	KAYENZI TSS	Trainer
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17	KWIZERA INGABIRE Diane	GSNDP Cyanika	Trainer
18	NTIVUGURUZWA J. Berchmas	GIKONKO TVET SCHOOL	Trainer
19	MUTAGANZWA Gilbert	ES RUKARA	Trainer
20	MATATA Jean Bosco	GS ADEBE	Trainer
21	MUKAMULIGO Candide	St Joseph Primary School	Trainer
22	MBUGUJE Bienvenu	IPRC Ngoma	Trainer
23	TINDO Francois Xavier	Collegio Santo Antonio Zaccaria	Trainer
24	ZIRIMWABAGABO Jean Pierre	Lycee Catholique St Alain Mataba	Trainer
25	KAREKEZI Dieudone	IPRC Musanze	Trainer
26	HAKIZIMANA Joseph	Marie Dominic Mazzarello	Trainer
27	NDIKUBWIMANA Faustin	IPRC Kigali/Tss	Trainer

FOREWORD

The global rapid changes in the labour market tends to call for appropriate training and skills development through outcome-based training approaches. Skills development and employment promotion are central to Rwanda's transformative Vision 2050, aiming to secure high standards of living for all Rwandans. In a bid to transform Rwanda into a knowledge based economy, the National Strategic Transformation 1(NST1) calls socio-economic transformation through TVET skills development. The Rwanda TVET Board (RTB) was established to promote quality education in technical and vocation education and training from level one (1) to five (5) aimed at fast tracking socio-economic development of the country. Designing and distributing curricula, teaching materials, trainer's guides, methodologies and establish training methods for technical and vocation education and training from level one (1) to five (5); is among other RTB's responsabilities.

The existing curricula were limited and narrowed in terms of acquired skills and knowledge and were not meeting the requirements of the current labour market at both national and regional level. In addition there were barriers in vertical mobility and pathways in TVET which resulted in negative TVET perception. Furthermore, the were barriers to admission of TVET graduates of certain programs into higher learning institutions.

The TVET modernization process has begun with a clear picture of the programs focusing on Transport and Logistics sector with the high employment potential like Automobile Technology among others. In this respect, Rwanda TVET Board, is honoured to avail the revised level 4 curriculum in Automobile Technology developed a curriculum which serves as the official document and respond to the above mentioned concerns.

With the help of the training providers, trainers, parents whose role is central to the success of this curriculum, the trainees will gain appropriate hands on skills which will make a difference not only to their own lives but also to the success of Rwanda's economy.

I wish to sincerely extend my appreciation to the people who contributed towards the development of this document.

Dipl. - Eng. Paul UMUKUNZI

Director General/ RTB

List of Abbreviations

4IR	Fourth Industrial Revolutions
A/C	Air Conditioning
AI	Artificial Intelligence
BPO	Business Process Outsourcing
CDU	Curriculum Development Unit
CM	Complementary Modules
CV	Curriculum Vitae
DACUM	Developing a Curriculum
DCG	Design and communication graphic
ESSP	Education Sector Strategic Plan
HR	Human Resources
IAP	Industrial Attachment Program
MINEDUC	Ministry of Education
NSDEPS	National Skills Development and Employment Promotion Strategy
NST	National Strategy for Transformation
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
PSDYES	Private Sector Development & Youth Employment Strategy
PWM	Pulse With Modulation
REQF	Rwandan Education Qualification Framework
RQF	Rwandan Qualification Framework
RTB	Rwanda TVET Board
SDC	Swiss Agency for Development and Cooperation
SWOT	Strength Weakness Opportunities and Treats
TSS	Technical Secondary School
TVET	Technical and Vocational Education and Training
WHS	Work Health & Safety
WPL	Workplace Learning

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1. GENERAL INTRODUCTION

The curriculum presents a coherent and significant set of competencies to perform the occupation of a vehicle A/C service and repair mechanic, automotive electrician, automotive electronic technician, diesel engine repair technician, vehicle manual transmission mechanic and vehicle brake, steering and suspension system mechanic. It is designed with an approach that takes into account the training needs, the work situation, as well as the goals and the means to implement the training.

The modules of the curriculum include a description of the expected results of the training. They have a direct influence on the choice of the theoretical and practical learning activities. The competencies are the targets of the training: the acquisition of each is required for certification.

The curriculum is the reference to carry out the assessment of learning. Assessment tools of learning are developed based on this document.

The curriculum consists of three parts. The first part is of general interest and shows the nature and goals of the program and the key concepts and definitions used in the document. The second part presents the qualification, its level in the qualification framework, its purpose, its rationale and the list of modules it comprises. The third part deals with the training package. It includes the competencies chart, the sequencing of module learning, the description of each module and the course structure.

The pages describing the modules are the heart of a curriculum. They present the title of the module, the length of training, the amount of credits, the context in which the competency is performed, the prerequisite competencies, the learning units and the performance criteria.

In each module, a course structure is provided. The course structure describes the learning outcomes (knowledge, skills and attitudes) and the learning contents related to each learning unit. In addition, the learning activities and resources for learning are suggested.

Finally, the assessment specifications and guidelines are included in each module.

2. Rationale of the Qualification

Vision 2050 has identified Transport and Logistic services training Sector as one of the sixteen training pillars of Rwanda economic and social development. It recommends that the Transport and Logistic sevices training sector, now turned towards the subsistence be transformed into a value-added technology, market-oriented, particularly through the production of high value of Automobile technology sub-sector and relevant modern automobile Mechanic in Transportation sector. Also in the 7YGP/NST1 (2017-2024) Rwanda government seeks to increase the number of students attending TVET to 60% by 2024 from 31.1% in 2017. We believe that TVET skills are one of the drivers that support the economic transformation we want in our country, and this is only possible if graduates from TVET schools are highly skilled and competitive on the labour market including transport and logistics. In order to achieve these goals, a capacity building strategy is necessary. It's in this regard that, the strategic priorities identified in the "Education Sector Strategic Plan" (ESSP) 2010-2015, relates to an improvement of the Technical and Vocational Education and Training (TVET) system to satisfy the market demand of qualified workers.

QUALIFICATION DETAILS

2.1. Description

Title:	TVET Certificate IV in Automobile Technology
Level:	RQF Level 4
Credits:	120
Sector:	Transport and Logistics
Trade:	Automobile Technology
Issue date:	May 2023

2.2. Graduate profile

This qualification provides the skills, knowledge, and attitude for a learner to be competent in a range of routine tasks and activities that require the application of practical skills in a defined context. Work would be undertaken in Construction Companies,farming, transport, warehouses, Mechanical training schools, garages performing a range of tasks related to the work with the biggest engines, vehicle manual transmission system, vehicle control system, vehicle electrical systems, vehicle air conditioning system, inspecting, servicing, and repairing any damage to the engine or vehicle where mechanical activities are carried out. Graduates may work alone or with others in a team but usually with minimum supervision.

At the end of this qualification, qualified learners will be able to:

1. Develop a business plan
2. Apply computer skills
3. Using intermediate english at workplace
4. Gukoresha ikinyarwanda cy'umunyamwuga
5. Communique en appliquant les élements des langues française
6. Promote the culture of peace
7. Integrate the workplace
8. Apply fundamental mathematical analysis
9. Apply mechanics and properties of matter
10. Demonstrate basic knowledge of chemistry
11. Apply digital and power electronics
12. Describe knowlegde of materials
13. Apply Design and communication graphics
14. Overhaul diesel engine
15. Repair diesel engine systems
16. Install and maintain automotive electrical system

17. Maintain manual transmission system
18. Maintain vehicle control systems
19. Maintain automotive air conditioning system

2.3 Minimum entry requirements and pathways

The minimum entry requirement to this course is to have completed TVET certificate level III in automobile technology or other related areas.



Pathways into the qualification

Pathways from the qualification



Preferred pathways for candidates entering this qualification include:

- To have completed TVET certificate level 3 in automobile technology
- A range of other related TVET certificate level 3 qualifications in automobile

Progression route of candidates achieving this qualification include:

- TVET Certificate V in automobile technology
- A range of other related TVET Certificate V qualifications.

2.4 Job related information

This qualification prepares individuals to integrate the transport and logistic sector with the professionalization of automobile technology . This qualification again offers the opportunity to execute the works as vehicle A/C service and repair mechanic, automotive electrician, automotive electronic technician, diesel engine repair technician, vehicle manual transmission mechanic and vehicle brake, steering and suspension system mechanic while ensuring that safety, security and environmental regulations are respected.

Possible jobs related to this qualification

Vehicle A/C service and repair mechanic

Automotive electrician

Diesel engine repair technician

Vehicle manual transmission mechanic

Vehicle brake, steering and suspension systems mechanic

2.5 Employability and life skills

This qualification will also provide opportunity to learn industry needed soft skills known as employability and life skills which is the key towards the success of any industry. This includes communication skills, Computer literacy, negotiation skills, organization skills, personal and interpersonal skills and managerial skills. Individuals with this qualification will easily integrate themselves in the workplace environment.

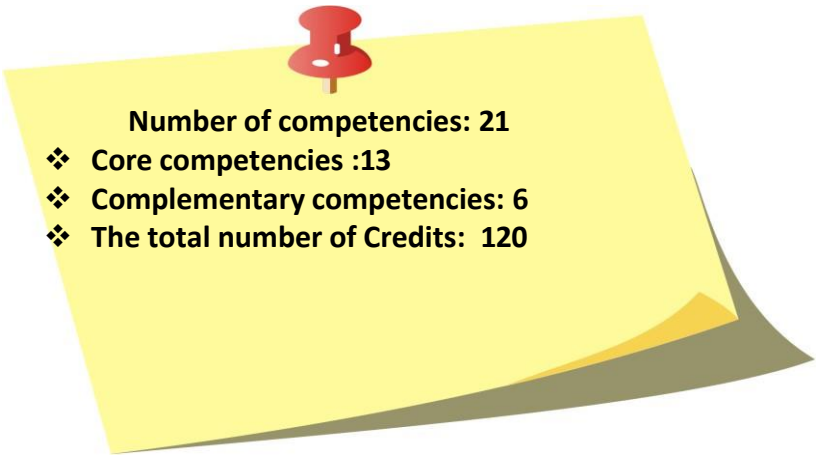
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2.7 Information about competencies

No	Code	Complementary competencies	Credit
1	CCMBP402	Develop a business plan	**3**
2	CCMCS402	Apply computer skills	**3**
3	CCMCT402	Citizenship	**3**
4	CCMEN402	Using intermediate english at workplace	**3**
5	CCMKN402	Gukoresha ikinyarwanda cy'umunyamwuga	**3**
6	CCMFT402	Communique en appliquant les élements des langues française	**3**
Total			18

	No	Code	Core competencies	Credit
GENERAL		**GENAM401**	Apply fundamental mathematical analysis	**6**
		GENMP401	Apply mechanics and properties of matter	**4**
		GENBC401	Demonstrate basic knowledge of chemistry	**3**
		AUTCG401	Apply Design and communication graphics	**4**
		AUTEA401	Apply digital and power electronics	**7**
		AUTKM401	Describe knowlegde of materials	**4**
		AUTIA401	Integrate the workplace	**20**
SPECIFIC		**AUTDO401**	Overhaul diesel engine	**6**
		AUTER401	Repair diesel engine systems	**6**
		AUTEM401	Install and maintain automotive electrical system	**11**
		AUTMT401	Maintain Vehicle manual transmission system	**12**
		AUTCM401	Maintain vehicle control systems	**12**
		AUTAM401	Maintain automotive air conditioning system	**5**
Total				**100**



Number of competencies: 21

- **Core competencies :13**
- **Complementary competencies: 6**
- **The total number of Credits: 120**

2.8. Allocation of Learning Hours

N0	Module name	Learning outcome	Theoretical hours	Practical hours	Total hours
1	Entrepreneurship	LO1. Identify elements of business plan	7	3	10
		LO2. Write a business plan	5	5	10
		LO3. Establish business contingency plan	4	3	7
		LO4. Present a business plan	1	2	3
Total hours module 1			17	13	30
2	ICT	LO1. Describe the operating system	4	11	15
		LO2. Customize the computer features	3	7	10
		LO3. Protect computer system	2	3	5
Total hours module 2			9	21	30
3	Citizenship	LO1. Make a Comparative study of Genocides.	7	3	10
		LO2. Protect human rights	7	3	10
		L.O3. Promote Peace and social cohesion	7	3	10
Total hours module 3			21	9	30
4	English	L.O1. Write factual, descriptive, and explanatory correspondence text.	4	5	9
		L.O2. Apply a range of listening strategies and activities to understand predictable messages	4	3	7
		L.O3. Discussion, supporting or refute ideas on general and trade-related topics	3	4	7
		L.O4. Read medium texts on general and trade-related topics	4	3	7
Total hours module 4			15	15	30
5	Ikinyarwanda	L.O1. Gukoresha ubuvanganzo gakondo bufatiye ku mwuga ashyikirana n'abandi , gutandukanya ubwoko bw'inshinga no gukoresha ikomorazina n'ikomoranshinga .	6	4	10
		L.O2. Gukoresha			

		Ikinyarwanda uwiga agaragaza ibyiza by'ikoranabuhanga mu iterambere ry'umwuga no gusesengura ibinyazina binyuranye.	2	3	5
		L.O3. Gukoresha Ikinyarwanda uwiga agaragaza ububi bw'ibiyobyabwenge mu rubyiruko, kugaragaza amategeko y'igenamajwi yerekeye n'ingombajwi mu izina mbonera no kunoza imyandikire y'inyuguti nkuru mu nteruro.	2	3	5
		L.O4. Gukoresha Ikinyarwanda uwiga agaragaza uburyo bunyuranye bwo gufata neza ibidukikije no gukoresha indangahantu n'ibyungo.	2	3	5
		L.O5. Gukoresha Ikinyarwanda uwiga agaragaza akamaro k'ubutabazi bw'ibanze no gukoresha impakanyi n'indango z'inshinga.	3	2	5
Total hours module 5			**15**	**15**	**30**
6	Français	L.O1. Préciser des informations,	6	5	11
		L.O2. Décrire des personnes et des lieux et exprimer ses goûts	4	4	8
		L.O3. Indiquer l'itinéraire.	5	6	11
Total hours module 6			**15**	**15**	**30**
7	Applied Mathematics	LO1: Analyse algebraic functions	8	7	15
		LO2: Apply fundamentals of differentiation	10	10	20
		LO3: Apply exponential functions	7	8	15
		LO4: Apply logarithmic functions	5	5	10
Total hours module 7			**30**	**30**	**60**
8	Applied Physics	LO1: Describe laws of motion and their applications	3	1	4
		LO2: Apply static equilibrium and elasticity	4	4	8
		LO3: Analyse fluid mechanics	4	2	6

		LO4: Apply thermodynamics	4	5	9
		LO5: Examine effects of electric current flow in DC electric circuit	3	4	7
		LO6: Apply geometric instruments	3	3	6
Total hours module 8			21	19	40
9	Applied Chemistry	LO1: Explain organic compounds	8	2	10
		LO2: Discuss biochemical molecules	5	5	10
		LO3: Describe polymers	2	8	10
Total hours module 9			15	15	30
10	DESCRIBE KNOWLEDGE OF MATERIAL	LO: 1 Describe metal and non-metal	3	7	10
		LO2. Describe metal alloys and steel alloying elements.	6	14	20
		LO3: Describe Plastics and Composite materials	3	7	10
Total hours module 10			12	28	40
11	APPLY DESIGN AND COMMUNICATION GRAPHICS	LO 1: Geometrical constructions and tangency	2	6	8
		LO 2: Development of surface and its true shape	2	6	8
		LO 3: Conic sections and loci	4	8	12
		LO 4. Screw threads and conventional representations	4	8	12
Total hours module			12	28	40
12	APPLY DIGITAL AND POWER ELECTRO NICS	LO 1. Describe electronic components principles	5	5	10
		LO2. Apply digital electronics and digital coding	5	15	20
		LO3. Design power electronic circuit	5	15	20
		LO4. Apply digital control systems	5	15	20
Total hours			20	40	70
13	OVERHAUL DIESEL ENGINE	LO1. Dismantle Diesel engine from the vehicle	4	8	12
		LO2. Overhaul Diesel engine	11	25	36
		LO3. Remount Diesel engine	4	8	12
Total hours			19	41	60
14	REPAIR DIESEL	LO1. Maintain Diesel engine fuel supply	10	15	25

	ENGINE SYSTEMS	System			
		LO2. Diesel air supply system	2	5	7
		LO3. Service engine lubrication system	5	9	8
		LO4. Maintain engine cooling system	2	6	8
		LO5. Repair Diesel engine exhaust system	4	8	12
Total hours			23	37	60
15	INSTALL AND MAINTA IN AUTOM OTIVE ELECTRICAL SYSTEM	LO1. Service starter battery	5	5	10
		LO2. Maintain charging system	5	10	15
		LO3. Maintain starting system	6	14	20
		LO4. Perform ignition system service	6	14	20
		LO5. Repair lighting and signaling system	7	18	25
		LO6. Troubleshoot electrical system accessories	5	15	20
Total hours			34	76	110
16	MAINTAIN MANUAL TRANSMISSI ON SYSTEM	LO1. Maintain Clutch System	9	21	30
		LO2. Maintain manual gear box and transfer box	12	28	40
		LO3. Maintain propeller shaft and axle shaft	6	14	20
		LO4. Maintain final drive with differential.	9	21	30
Total hours			36	84	120
17	MAINTAIN VEHICLE CONTROL SYSTEMS	LO1. Maintain brake system.	12	28	40
		LO2. Maintain steering system	12	28	40
		LO3. Maintain suspension system	12	28	40
Total hours			36	84	120
18	MAINTAIN AUTOMOTI VE AIR CONDITIONI NG SYSTEM	LO1. Conduct preventive maintenance of A/C system	3	7	10
		LO2. Maintain A/C electrical system	6	14	20
		LO3. Perform piping works	6	14	20
Total hours			15	35	50
	Integrate the workplace	LO.1 Investigate and secure industrial attachment place.	8	2	10
		LO.2 Deal with workplace challenges.	7	3	10

		LO.3 Get briefed on Industrial attachment program.	8	2	10
		LO.4 Develop one's competencies on the workplace.	7	163	170
Total hours			30	170	200
			401	779	1180

3. TRAINING PACKAGE

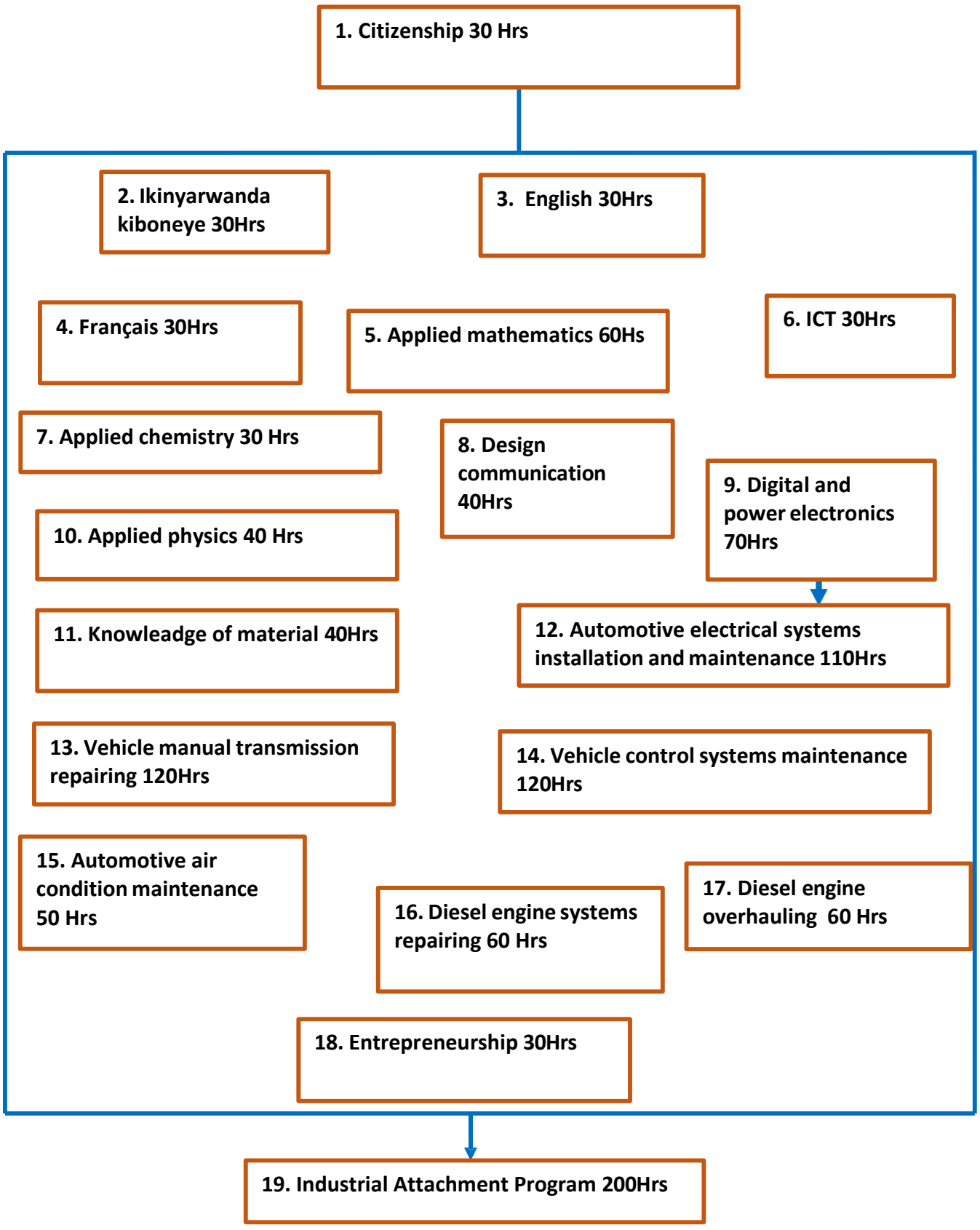
The training package includes the competencies chart, the flowchart, the modules, the course structure, and the assessment guidelines.

3.1 Course structure

The course structure describes the learning outcomes for each learning unit. These learning outcomes are the essential skills and knowledge to be acquired. The contents to be covered for each learning outcome are prescriptive. The Learning Activities contain a series of suggestions, usually with several options, that will guide the learner and the trainer.

3.2 Flowchart

The flowchart of sequencing of learning is a schematic representation of the order of acquisition of the competencies. It provides an overall planning of the entire training programme and shows the relationship between the modules. This type of planning is to ensure consistency and progression of learning. For each module, the flowchart shows the learning that is already in place, the learning that is to take in parallel or later. The positions defined will have a decisive impact on all subsequent pedagogical choices. The flowchart of the sequence of learning of the modules of the training programme is presented on the following page.


1. Citizenship 30 Hrs
2. Ikinyarwanda kiboneye 30Hrs
3. English 30Hrs
4. Français 30Hrs
5. Applied mathematics 60Hs
6. ICT 30Hrs
7. Applied chemistry 30 Hrs
8. Design communication 40Hrs
9. Digital and power electronics 70Hrs
10. Applied physics 40 Hrs
11. Knowleadge of material 40Hrs
12. Automotive electrical systems installation and maintenance 110Hrs
13. Vehicle manual transmission repairing 120Hrs
14. Vehicle control systems maintenance 120Hrs
15. Automotive air condition maintenance 50 Hrs
16. Diesel engine systems repairing 60 Hrs
17. Diesel engine overhauling 60 Hrs
18. Entrepreneurship 30Hrs
19. Industrial Attachment Program 200Hrs

ASSESSMENT GUIDELINES

4.1 Assessment Methodology

To assess knowledge, practical, and application skills through a jury system of continuous evaluation that encourages learners to display understanding of the principles in application to set practical tasks and their attendant theory to assess self-learning.

There are two types of assessment (Formative Assessment and Summative/Integrated Assessment). Each assessment has its own rule for passing to be declared competent.

Formative Assessment

- This is applied on all types of modules (e.g. Complementary, General and Specific modules)
- A trainee to be competent for a formative module must have at least 70%
- A trainee to be eligible to undertake integrated assessment of specific modules must have at least 50% as passing line for general and complementary modules.
- Each trainee should be competent on all formative assessments to be declared competent on that module.
- All formative assessment should be declared competent before taking the summative/integrated assessment

Summative Assessment

- All Summative/Integrated assessment should match with the content of the module in the curriculum.
- Summative/Integrated Assessment is always in practical, giving it as a theoretical type of assessment is not acceptable.
- The integrated situation provided in the curriculum is a sample of the assessment to be carried out, the Trainer/Teacher has the role of developing another one referring to the task to be carried out in the integrated situation in accordance to the circumstances inside school, but the integrated situation should stick on the components of a task.
- During Summative/Integrated assessment, assessor panel members should be three (3).

The trainee can be declared competent based on the assessment CRITERIA and its respective assessment indicators

The Passing Line for the modules is:

- **50 % for general and complementary modules**
- **70 % for specific modules**

<table>
<tr><th colspan="2">Training delivery</th><th>100%</th><th colspan="2">Assessment</th><th>Total 100%</th></tr>
<tr><td colspan="2">Theoretical content</td><td>30%</td><td rowspan="4">Formative assessment</td><td>30%</td><td rowspan="4">50%</td></tr>
<tr><td colspan="2">Practical work:</td><td rowspan="3">70%</td><td rowspan="3">70%</td></tr>
<tr><td>Group project and presentation</td><td>20%</td></tr>
<tr><td>Individual project /Work</td><td>50%</td></tr>
<tr><td colspan="2"></td><td colspan="2">Summative Assessment</td><td>50%</td></tr>
</table>

1. **Summative assessment is always conducted at the completion of module delivery. It should be practical through an integrated situation for specific modules and in any other forms of assessment for complementary and general modules.**

2. **Learning hours assigned to specific module includes the duration assigned to integrated assessment**

GLOSSARY

Assessment: A process of gathering and judging evidence in order to decide whether a person has attained a standard of performance.

Assessment criteria: Statements which describe performances and place them in context with sufficient precision to allow valid and reliable assessment.

Best practice: Management practices and work processes that lead to outstanding or top-class performance and provide examples for others.

Competency standard: An industry-determined specification of performance which sets out the skills, knowledge and attitudes required to operate effectively in employment. Competency standards are made up of units of competency, which are themselves made up of elements of competency, together with performance criteria, a range of variables, and an evidence guide.

Competency:means the ability to apply knowledge, skills and personal, social and methodological skills in the workplace or during learning, as well as in personal and professional development. This ability or capacity is acquired through leaning, exposure to the tasks and series of training allowing one to perform specific task autonomously. Reason why in the context of the CBE Framework competencies are described as responsibility and independence.

Competency-based assessment (or CBA): The gathering and judging of evidence in order to decide whether a person has achieved a standard of competency.

Complementary competencies: Set of knowledge, skills and attitudes which are not directly linked to a specific occupation or industry, but which are important for work, education and life in general, such as communication, mathematics, organizational aptitude, and computer literacy, interpersonal and analytical competency.

Core modules: Modules leading to competencies' acquisition that an industry sector has agreed upon as essential for a person to be accepted as competent at a particular level. All modules may be core, but in many cases competency at a level will involve core modules plus optional or specialization modules. Core competencies are normally those central to work in a particular industry.

Credential: Formal certification issued for successful achievement of a defined set of outcomes, e.g. successful completion of a course in recognition of having achieved particular knowledge, skills or competencies; successful completion of an apprenticeship or traineeship.

Credit: The acknowledgement that a person has satisfied the requirements of a module.

Curriculum: The specifications for a course or subject (module) which describe all the learning experiences a learner undergoes, generally including objectives, content, intended learning outcomes, teaching methodology, recommended or prescribed assessment tasks, assessment exemplars, etc.

Evidence guide: The part of a competency standard which provides a guide to the interpretation and assessment of the unit of competency, including the aspects which need to be emphasized in assessment, **relationships to other units, and the required evidence of competency.**

Flexible delivery: A range of approaches to providing education and training, giving learners greater choice of when, where and how they learn. Flexible delivery may involve distance education, mixed-mode delivery, online education, self-paced learning, self-directed learning, etc.

Formal education: Also formal training education or training provided in educational institutions such as schools, universities, colleges, etc. or off the job in a workplace, usually involving direction from a teacher or instructor.

General competencies: competencies correspond to larger operations that go beyond the tasks, but generally contribute to their implementation. These activities require more fundamental learning and are generally common to several tasks and transferable to many work situations.

Generic modules: Modules leading to the attainment of complementary competencies.

Informal education: The acquisition of knowledge and skills through experience, reading, social contact, etc.

Internship: An opportunity for a learner to integrate career related experience by participating in planned, supervised work.

Key competencies: Any of several generic skills or competencies considered essential for people to participate effectively in the workforce. Key competencies apply to work generally, rather than being specific to work in a particular occupation or industry. The following are key areas of competency which were developed into seven key competencies: collecting, analyzing and organizing information; communicating ideas and information; planning and organizing activities; working with others and in teams; using mathematical ideas and techniques; solving problems; and using technology.

Knowledge: means the result of the adoption of information through the learning process. Knowledge is a set of facts, principles, theories and practices related to area of work or study. In CBE context lifelong learning knowledge is described as theoretical and / or factual.

Learning outcomes: are statements of what learner knows, understands and can perform, based on the completion of the learning process, defined by knowledge, skill and competency.

Learning activities: Suggested activities that can be developed during lesson planning and activity preparation. The choice of learning activities must be tailored according to group size, available material resources and communication tools.

Learning hours: Amount of hours required to acquire the competency, including the time allocated to evaluation, which is estimated between 5 and 10% of the total learning time of the competency.

Learning outcomes: Statements that indicate what learners will know or be able to do as a result of a learning activity. Learning outcomes are usually expressed as knowledge, skills, or attitudes.

Learning unit: Any of the basic building blocks of a module, which describes the key activities or the elements of the work covered by the module

Module: A unit of training which corresponds to one competency and which can be completed on its own or linked to others.

Occupation: The principal business of one's life.

Performance criteria The part of a competency standard specifying the required level of performance in terms of

a set of outcomes which need to be achieved in order to be deemed competent. It describes the quality requirements of the result obtained in labor performance.

Qualification: means the formal name for the result of a process of assessment and validation, which is obtained when a competent body determines that an individual has achieved learning outcomes to the standards laid down.

Quality assurance: The systems and procedures designed and implemented by an organization to ensure that its products and services are of a consistent standard and are being continuously improved.

Recognition of prior learning (or RPL): The acknowledgement of a person's skills and knowledge acquired through previous training, work or life experience, which may be used to grant status or credit in a subject or module.

Skills: are the ability to apply knowledge and use the principle of "know how" to perform a specific task and to solve the problem. In the context of the CBE Framework, skills are defined as cognitive (involving the use of logical, intuitive and creative thinking), practical (including physical skill and use of methods, materials, devices and instruments) and social skills (communication and cooperation skills, emotional intelligence and other).

Specific competencies: Competencies that are directly related to the tasks of the occupation in the workplace context. They refer to concrete, practical, and focused aspects

Traineeship: A system of vocational training combining off-the-job training at an approved training provider with on-the-job training and practical work experience. Traineeships generally take one to two years and are now a part of the New Apprenticeships system.

Unit of competency: A component of a competency standard. A unit of competency is a statement of a key function or role in a particular job or occupation. See also element of competency, performance criteria, range of variables.

Employable Skills for Sustainable Job Creation

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