Republic of Rwanda
Ministry of Education

RTB | RWANDA TVET BOARD

CURRICULUM STRUCTURE

# TVET Short course

## TVET dual training short course in Auto-Mechanic

Kigali, February 2023

TRLAUT0001

Republic of Rwanda
Ministry of Education

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# TVET Short course
# in
# Auto-mechanics

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## 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 short course curriculum in Auto mechanics developed in dual training system 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**

## Acknowledgments

RwandaTechnical Vocational and Training 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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**Facilitation**

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**Curriculum Development Team**

**1. Specific modules**

| N° | Names | Organization | Position |
|---|---|---|---|
| 1. | MUNEZA Philemon | TUMECO Garage | Mechanic |
| 2. | HAGENIMANA Elysee | IPRC Ngoma | Instructor |
| 3. | DUSHIMIMANA Jean Baptiste | Gacuriro TVET school | TVET Trainer |
| 4. | TWIZERE Janvier | ETAG | TVET Trainer |
| 5. | NIYONKURU Irenee | IPRC KARONGI | Instructor |
| 6. | HARIMANA Pereline | GOLDENS garage | Auto Electrician |
| 7. | DUKUZIMANA Honorine | ATECAR | Technician |
| 8. | UWIMANA Jean De Dieu | MEDECAR Garage | Mechanic |
| 9. | UWINEZA Julienne | Honest company | Auto technician |

## List of Abbreviations

| | |
|---|---|
| **4IR** | Fourth Industrial Revolutions |
| **AI** | Artificial Intelligence |
| **BPO** | Business Process Outsourcing |
| **CAD** | Computer Aided Design |
| **CDU** | Curriculum Development Unit |
| **CM** | Complementary Modules |
| **CV** | Curriculum Vitae |
| **DACUM** | Developing a Curriculum |
| **ESSP** | Education Sector Strategic Plan |
| **HR** | Human Resources |
| **IAP** | Industrial Attachment Program |
| **IOT** | The Internet of Things |
| **MINEDUC** | Ministry of Education |
| **NST** | National Strategy for Transformation |
| **NSDEPS** | National Skills Development and Employment Promotion Strategy |
| **OHS** | Occupational Health and Safety |
| **PPE** | Personal Protective Equipment |
| **PSDYES** | Private Sector Development & Youth Employment Strategy |
| **REQF** | Rwandan Education Qualification Framework |
| **RP** | Rwanda polytechnic |
| **SWOT** | Strength Weakness Opportunities and Treats |
| **TSS** | Technical Secondary School |
| **SDC** | Swiss Agency for Development and Cooperation |
| **TVET** | Technical and Vocational Education and Training |
| **WDA** | Workforce Development Authority |
| **WHS** | Work Health & Safety |
| **WPL** | Workplace learning |
| **SMAW** | Shielded metal arc welding |

Contents

## 1. GENERAL INTRODUCTION

Complying with government strategies and policies such as National Strategy for Transformation (NST1)[1], National Skills Development and Employment Promotion Strategy (NSDEPS)[2], Private Sector Development & Youth Employment Strategy (PSDYES)[3], Education Sector Strategic Plan (ESSP)[4], TVET Policy & Strategy, Workplace Learning Policy among others, the Government of Rwanda wants to improve access, quality and relevance of the TVET system and the labour market integration of TVET graduates. It is therefore that the government of Rwanda through Ministry of Education wants to develop **short course curriculum of Auto mechaics** in dual training system which combines the advantages of in-school theoretical learning with practical technical and soft skills development in companies. The dual training scheme will contribute to closely match the needs of the private sector and enhance the quality of the training through learning in authentic professional situations. In addition, it will provide an accurate basis for engaging the private sector in training programme design, training delivery and certification as well as co-financing TVET, thus contributing to increased sustainability of the TVET system in Rwanda.

**TVET dual traning short course in auto-mechanics** presents a coherent and significant set of competencies required to perform the occupation of an **Automobile mechanic** .This curriculum is aligned with specific needs of the companies linked to the acquired vocational skills and abilities as well as professional and personal suitability of company/industry and vocational school training personnel. It is designed with an approach that takes into account the training needs, the real work situation, as well as the goals and the means to implement training.

[1] The National Strategy for Transformation (NST1) which is also the Seven Year Government Program (7YGP) comes at a unique moment in the country's development trajectory which will see the crossover from Vision 2020 towards Vision 2050. This strategy is expected to lay the foundations for decades of sustained growth and transformation that will accelerate the move towards achieving high standards of living for all Rwandans.

[2] National Skills Development and Employment Promotion (NSDEPS) is an optimized skills and employment ecosystem drawn from Vision 2050 and its associated strategies and policies, to foster long-term economic transformation.

[3] Private Sector Development and Youth Employment Strategy (PSDYES) is a unified umbrella for all support to the private sector targeting so-called Anchor Firms in key value chains, supporting them across the board with technology upgrading support, skills development, access to finance, trade facilitation and more.

[4] Education Sector Strategic Plan (ESSP) 2018/19-2023/24 marks the update of the ESSP 2013/14-2017/18 and alignment of plans for Rwanda's education sector in line with country development plans like the Economic Development and Poverty Reduction Strategy (EDPRS 3), National Strategy for Transformation (NST-1) and 7 Year Government Program (7 YGP).

Dual Training approach used in the development of this curriculum entails to coordinated learning avenues (in- company setting and vocational education & training setting), whereby the practical training part will be delivered as on-the-job learning in companies and other workplaces and supplementary training will be delivered in TVET training institutions. The training in the TVET institution will comprise theory, basic technical and complementary skills training, necessary general education and the theoretical part of life skills or work readiness training, entrepreneurship training and other appropriate modules.

The curriculum structure consists of four parts. The first part is of general introduction. It shows the philosophie behind the development of the curriculum and how the document will be used. 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. The pedagogical fundamentals define the division of competence acquisition to both learning sites, including general roles of each site. The training package is described also the course structure, the flow chart (the sequence of modules) and the distribution of competencies and elements of competencies in training sites. Finally, the assessment specifications and guidelines are included. The assessment procedures are designed due to the fact, that the trainee will mainly learn in the company. The assessments by the company facilitators must therefore influence considerably progress and final certification. The workplace comprehensive assessment as well as the summative/ integrated assessments done at the company asks for several procedures, guidelines, and forms to be implemented.

A part of this curriculum structure, a course structure is provided. It presents the title of the module, the length of training, the amount of credits, the context in which the competency is performed, the element of competency and the performance criteria.The course structure describes also the learning outcomes (knowledge, skills and attitudes) and the indicative contents related to each learning outcomes as well as time spent at each learning site. In addition, the learning activities and resources are suggested. The assessment specifications and guidelines are also included in each module

In additional to this curriculum structure and course structure, the liaison book that includes tools for verification and assessment of dual training and learning process progress is developed to cope with the actual Rwandan system, for all actors; trainees, TVET school trainers and Workplace learning facilitators.

## 2. QUALIFICATION DETAILS

### 2.1. Description

| | |
|---|---|
| **Title:** | TVET dual traning shortcourse in Auto mechanic |
| **Level:** | N/A |
| **Credits:** | 130 |
| **Sector:** | Transport and Logistics |
| **Program:** | Auto mechanics |
| **Issue date:** | February 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, inspecting, servicing, and repairing any damage to the engine or vehicle where mechanical activities are carried out. Graduates may work with some autonomy or in a team but usually under close supervision.

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

1. Describe the occupation and learning process
2. Maintain SHE at workplace
3. Communicate effectively at workplace
4. Create a business
5. Apply Basic automotive electricity and electronics
6. Apply basic technical drawing
7. Apply basic welding to automobile
8. Repair automobile engine
9. Repair engine cooling system
10. Repair engine fuel supply system
11. Repair engine lubrication system
12. Repair engine exhaust system and turborcharger
13. Repair wheel and tyre
14. Repair suspension a nd steering
15. Repair propeller shaft joint and differential
16. Repair wheel and tyre
17. Repair Gearbox

## 2.3 Minimum entry requirements and pathways

The minimum entry requirement to this course is to be mentally fit and interest in automobile technology and related areas.

**Pathways into the qualification** → **Pathways from the qualification**

Preferred pathways for candidates entering this qualification include:

- To have completed 9 Years Basic or drop out in ordinary level

Progression route of candidates achieving this qualification include:

- To workplace

## 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**, wheel and tyre maintainer and engine repair mechanic**, **transmission repair** while ensuring that safety, security and environmental regulations are respected.

**Possible jobs related to this qualification**

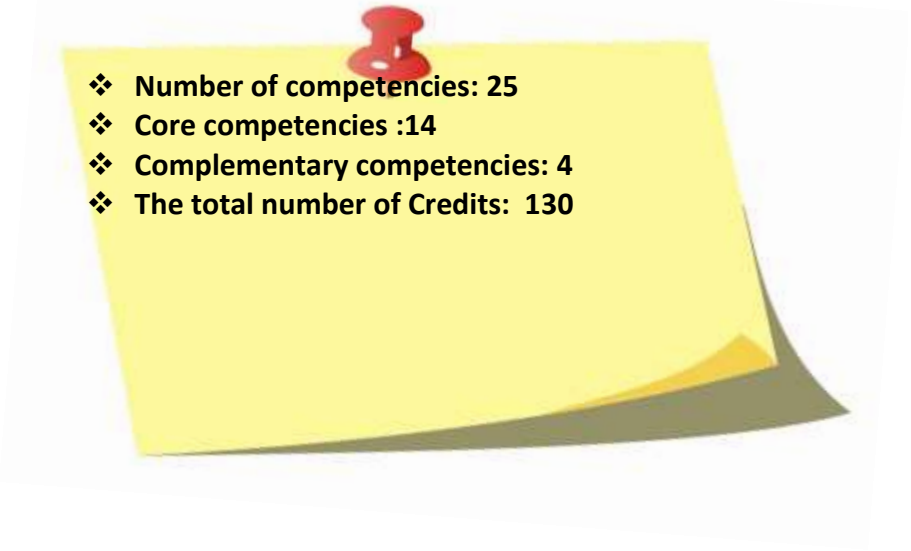
**Wheel and tyre maintainer**
**Engine repair mechanic**
**Transmission repairer**

## 2.5 Information about competencies

| No | Code | Complementary competencies | Credit |
|---|---|---|---|
| | CCMOL001 | Describe the occupation and learning process | **3** |
| | CCMHE001 | Maintain SHE at workplace | **3** |
| | CCMCL001 | Communication at workplace | **3** |
| | CCMCB001 | Create a business | **3** |
| **Total** | | | 12 |

| | No | Code | Core competencies | Credit |
|---|---|---|---|---|
| SPECIF | | AUTTD001 | Perform basic technical drawing | **3** |
| | | AUTBE001 | Apply Basics of Electricity and Electronics | **3** |
| | | AUTAW001 | Apply Basics welding to automobile | **3** |
| | | AUTER001 | Repair automobile engine | **15** |
| | | AUTEC001 | Repair engine cooling system | **9** |
| | | AUTFS001 | Repair engine fuel supply | **7** |

| | | | |
|---|---|---|---|
| | AUTEL001 | Repair engine lubrication system | **10** |
| | AUTES301 | Repair engine exhaust system and turbo charger | **12** |
| | AUTSC301 | Repair brake | **6** |
| | AUTCS001 | Repair geabox | **9** |
| | AUTCS001 | Repair properller shaft, joint and differential | **12** |
| | AUTWT301 | Repair clutch | **9** |
| | AUTSR001 | Repair Suspension and steering | **12** |
| | AUTWT001 | Repari wheel and tyre | **8** |
| **Total** | | | **118** |



- **Number of competencies: 25**
- **Core competencies :14**
- **Complementary competencies: 4**
- **The total number of Credits: 130**

## 3. TRAINING PACKAGE

The training package includes the vocational pedagogical fundamentals, the collaboration of the learning sites, the course structure, the flowchart and the distribution of competencies and elements of competencies in training sites.

### 3.1. Vocational pedagogical fundamentals

The dual training program guide herewith integrates the pedagogical fundamental base of the vocational basic training to be an **Automobile Mechanic**. Objective of the vocational basic training is to master typical occupational work situations in a competent way. To reach this goal, the trainees are acquiring all necessary competencies throughout the training of the competencies described in course structure/modules. These are to be understood as the minimal standards for the training. At the same time, they define, what at maximum can be assessed within the qualification procedures.

**The four dimensions of a competence:** A competence regroups a certain number of elements, which represent typical work situations. Each competence contains four dimensions: professional, methodological, social and self-competencies:

**Professional dimension**: encompasses skills, abilities and knowledge and enables professionals to independently solve technical tasks and problems in their field of work.
**Methodological dimension**: includes abilities, skills and knowledge that enable the application of various solution strategies, tools, and techniques. Specifically promoted are:

- Information management
- Learning strategies
- Problem solving skills
- Environment-friendly behavior

**Social dimension**: includes skills, abilities, and attitudes that enable successful interpersonal relationships. Specifically promoted are:

- Communication skills
- Ability to deal with conflict
- Ability to work in a team

**Self-dimension**: includes skills, abilities, and attitudes that relate to managing oneself. Specifically promoted are:

- Personal responsibility
- Autonomy
- Ability to judge and make decisions
- Good manners

They are integrated at the level of elements of competencies.

### 3.2. Collaboration of learning sites

Coordination and collaboration of learning sites are important conditions of the success of the vocational dual training. The trainees should be supported in putting in relation theory and practice all along the training.

Brain-related and visual/ tactile sense related competencies (psychometrics skills) are criteria to determine which learning outcomes to be covered in school or in company. The brain-related ones are acquired knowledge and understanding through thinking and rather in theoretical situations. The visual/tactile sense-related competences are acquired through experience and drill in practical situations.

The visual/ tactile sense-related competencies are mostly trained in the work environment, first by introducing them, then by exercising them and finally by applying them. At least for execution and application the company is the preferred learning site, often also for introduction due to availability of equipment, tools, and materials at the level of practical use. Brain-related competencies in contrary are mostly trained at TVET schools.

The collaboration of both learning sites (Company and TVET School) is key, the transposition of competences is a common task. Each learning site contributes based on the contribution of the other learning site. Through good collaboration (for example through regular visits of the WPL facilitators at the TVET schools or school trainers at the Companies), each learning site may assess and improve its contribution permanently. This is increasing the quality of the vocational training.

**Contribution by learning site:**

**The Company:** in the dual training system, the education of vocational practice takes place at the training company (or in training Company associations)
**The TVET School:** it transposes the theoretical part of training, consisting of methodological and professional know-how, mostly complementary and general competencies.

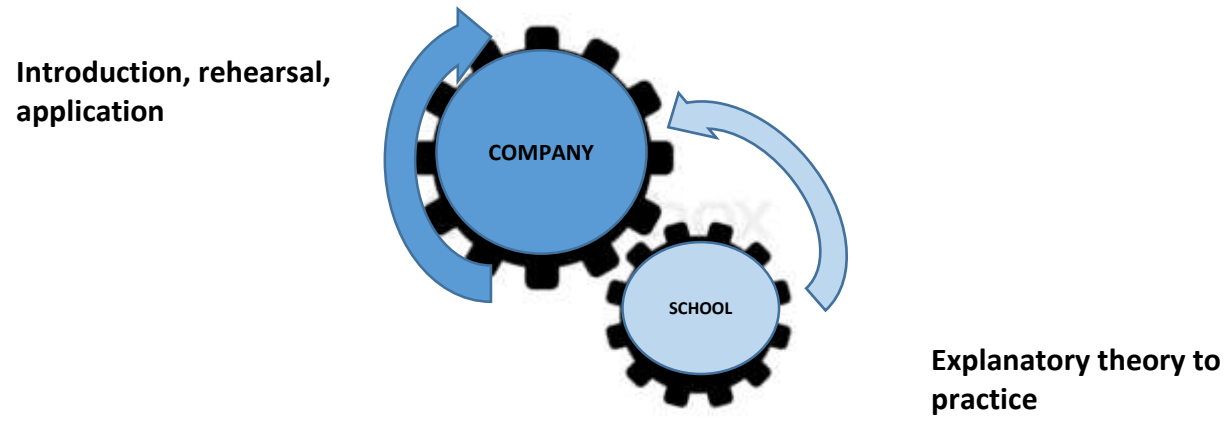



*Figure 1: Contribution by learning site*

### 3.3. 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**.**

### 3.4 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.

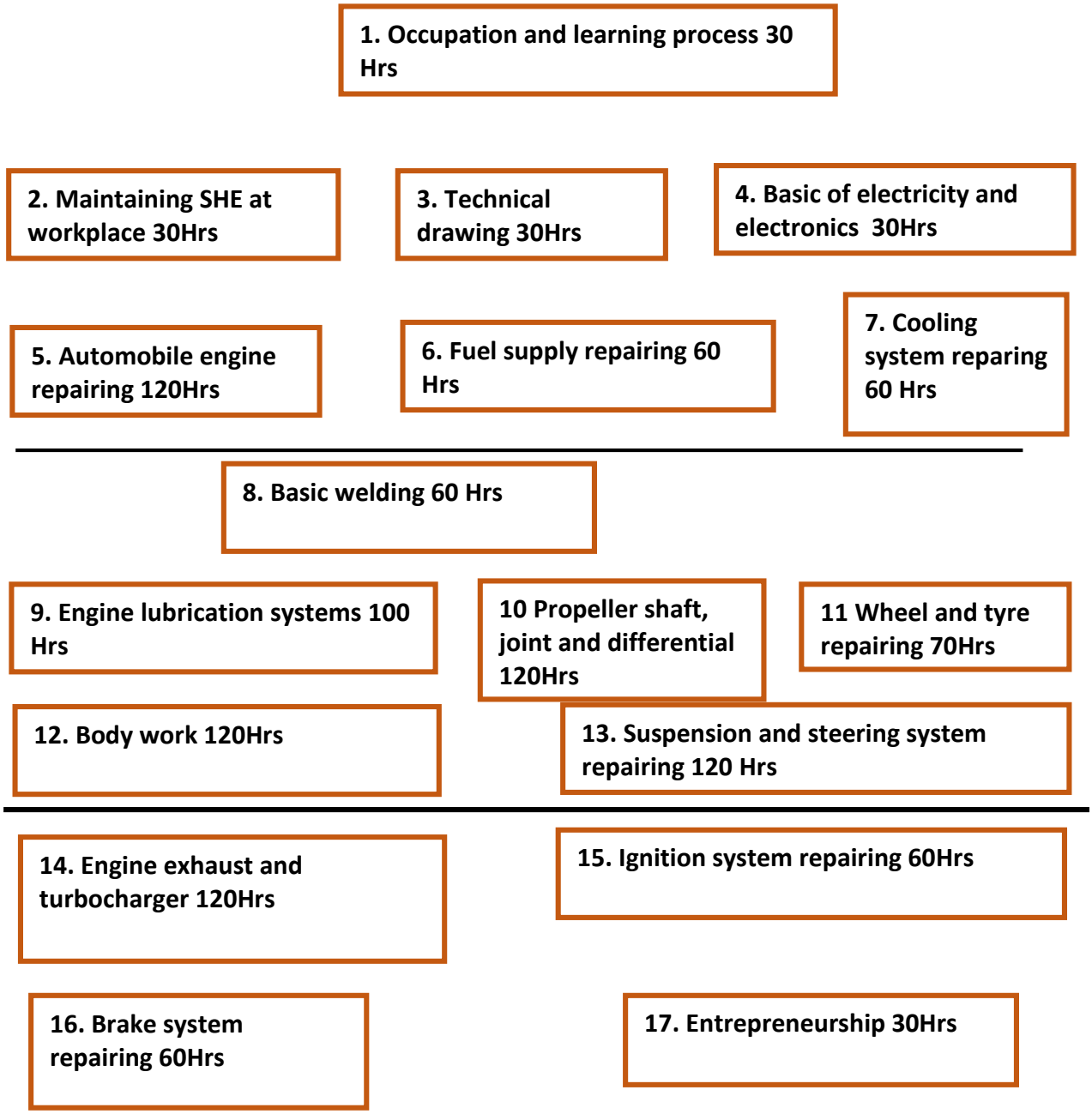



*Figure 2: Flowchart*

### 3.5. Distribution of Competencies and elements of competencies in training sites

The distribution of competencies and elements of competencies by training sites shows the time ratio between theory and practice all along the training. The following table also includes

the sequence of the start of training for each competence. In dual training program the more time for practice at the Company, the more the quality and relevance of the training is increased. In this case of **Automobile Technology**, the proportion is 44% at the TVET schools and 56 % at the Companies.

## 8 Allocation of Learning Hours

| N0 | Module name | Learning Outcome | Theoretical hours | Practical hours | Total hours |
|---|---|---|---|---|---|
| 1 | Brake system repairing | Identify mechanical brake system | 5 | 5 | 10 |
| | | Disassemble and inspect brake system | 5 | 15 | 20 |
| | | Maintain brake system components | 5 | 15 | 20 |
| | | Test brake systems | 2 | 8 | 10 |
| Total hours | | | 17 | 43 | 60 |
| 2 | Car body work | Prepare workplace | 5 | | 5 |
| | | Repair minor parts | 5 | 20 | 25 |
| | | Repair major parts | 10 | 20 | 30 |
| | | Protect vehicle panels | 10 | 20 | 30 |
| | | Paint vehicle panels | 10 | 20 | 30 |
| Total hours | | | 40 | 80 | 120 |
| 3 | Repair cooling | Prepare the workplace | 5 | 5 | 10 |
| | | Describe engine cooling systems | 5 | 15 | 20 |
| | | Repair engine cooling system components | 10 | 20 | 30 |
| Total hours | | | 20 | 40 | 60 |
| 4 | Driveline system repairing | 1. Describe transmission line sytem | 10 | 10 | 20 |
| | | 2. Dismantle transmission line components | 15 | 25 | 40 |
| | | 3. Maintain transmission line system | 5 | 15 | 20 |
| Total hours | | | 30 | 60 | 90 |
| 5 | Automotive engine repairing | 1.Describe automotive engine | 10 | 10 | 20 |
| | | 2. Maintain engine systems | 10 | 30 | 40 |
| | | 3. Overhaul engine | 20 | 40 | 60 |

| | | | | | |
|---|---|---|---|---|---|
| 6 | Engine fuel suppy repairing | 1. Describe engine fuel supply system | 5 | | 5 |
| | | 2.Diagnose petrol engine fuel suppy | 10 | 15 | 25 |
| | | Repair engine fuel supply system | 10 | 20 | 30 |
| **Total hours** | | | 25 | 35 | 60 |
| 7 | Ignition system repairing | 1.Describe ignition system | 5 | 5 | 10 |
| | | 2. Repair ignition system components | 10 | 20 | 30 |
| | | 3.Test ignition system | 5 | 15 | 20 |
| **Total hours** | | | 20 | 40 | 60 |
| 8 | Lighting system and accessories repairing | 1. identify lighting system and accessories | 10 | 10 | 20 |
| | | 2.Describe lighting and accessories | 10 | 20 | 30 |
| | | 3.Repair lighting system and accessories | 10 | 20 | 30 |
| **Total hours** | | | 40 | 50 | 80 |
| 9 | Starting system repairing | 1.Describe starting system | 5 | 5 | 10 |
| | | 2.Repair starter motor components and control circuit | 10 | 20 | 30 |
| | | 3.Test starting system | 5 | 15 | 20 |
| **Total hours** | | | 20 | 40 | 60 |
| 10 | Suspension and steering system repairing | 1.Identify steering systems | 5 | 5 | 10 |
| | | 2.Maintain steering system | 5 | 15 | 20 |
| | | 3.Identify suspension system | 10 | 10 | 20 |
| | | 4.Maintain syspension system | 10 | 20 | 30 |
| **Total hours** | | | 30 | 50 | 80 |
| 11 | Wheel and tyre repairing | 1.Prepare the workplace and apply safety | 5 | 5 | 10 |
| | | 2.Describe wheel and tyre | 10 | 10 | 20 |
| | | 3.Repair wheel and type | 10 | 30 | 40 |
| **Total hours** | | | 25 | 45 | 70 |

## 4. ASSESSMENT GUIDELINES

Within the competence-based approach, it is to assess theoretical, practical skills and attitudes through a panel system of continuous evaluation that encourages trainees to display understanding of the principles in application to set practical tasks and their attendant theory to assess self-learning.

In dual Training system, formative and summative assessments should be applied on both learning sites. The summative assessments should not only evaluate whether the trainee is able to continue or not to the other level.

### 4.1. Assessments at school

Formative assessments help to monitor and motivate teaching and support learning progress at the school. Formative assessment will serve as a verification tool for each candidate that he/she attended the whole training before he/she undergoes the summative assessment for specific modules. It must therefore be rigorously and carefully completed by the trainer at the TVET School.

Since formative assessments are like a bridge enabling the trainees to sit for summative assessments, they must succeed in formative assessments to be ready for summative assessments.

Formative assessement will be scored at 30% for each module. Each trainee to be declared competent for complementary and general modules must have at least 50%.

### 4.2. Assessment at the company

The formative assessment at the company is organized by the workplace learning facilitator. It will focus more on practical skills and assessing the behavioral approach towards a given task or a situation. In the company in day-to-day activities, due to the workplace facilitator is more a technician than a trainer; the formative assessments will use more observation and oral questioning. It should also serve to correct immediately the learning. Apart from the day-to-day formative assessments mentioned before, the workplace learning facilitator must sit for an interview at least two times per learning block/or term for each time for workplace comprehensive assessments.

Workplace comprehensive assessments: judge acquisition of specific competencies before the end of each term. The workplace learning facilitator organizes and leads a discussion of around two hours with the trainee. By doing so, each term the progress of the trainee can be observed, especially in methodological, social- and self-dimension of the competencies. For the professional dimension, the same form serves as a checklist to be sure having covered all content of the Dual Training Program. The workplace comprehensive assessment are scored at 70 %. In workplace comprehensive assessment the trainee must have atleast 70% to be declared competent.

### 4.3. End module assessment /Integrated assessment

Specific competencies learned at the workplace will be assessed at the company learning site to ensure fairness where the trainee is used to the work environment conditions, such as available tools, equipment and materials used at the workplace, which may differ from the workstations at the schools. However, due to the complexity of the assessment process organization, it must be supported by the relevant school resources and trainers.
The integrated situation provided in the curriculum is a sample of the assessment to be carried out, the WPL facilitator has the role of developing another one integrated situation referring to the task to be carried out in the integrated situation at the workplace in accordance with the circumstances at the company, but the integrated situation should stick on the components of a task. Integrated assessments is weighted at 50 % per module and the trainee must have atleast 70% to be declared competent.
**Note:** During assessment, trainees with special needs should be assisted accordingly.

### 4.4. End-level assessment at the school and company

The end-level assessment judges and scores overall competencies. It integrates practical assessment like the summative/ integrated assessment and the theoretical assessment at the school. The end level assessment should cover all modules acquired. End-level assessment should also be managed through the relevant school resources (internal verifier, deputy school director, trainer, and school-internal and external assessors).
The trainee to be declared competent should fulill the the following requirements:
- successfully completed all the modules required for a qualification,
- must have at least 50% on formative assessments and theory part,
- reached an average of the summative/ integrated assessments at 70%,
- reached an average of the workplace comprehensive assessment at 70%,
- successfully passed the end level assessment for practical part at 70%,

### 4.5. Weighting factors of each types of assessment

<table>
<tr><th>Learning site</th><th>Types of assessment</th><th>Weighting factors</th><th>Weight per term</th><th>Weighting per year/level</th></tr>
<tr><td>School</td><td>Formative assessment</td><td>30%</td><td rowspan="2">50%</td><td rowspan="3">40%</td></tr>
<tr><td rowspan="2">Company</td><td>Workplace comprehensive assessment</td><td>70%</td></tr>
<tr><td>End module/Integrated assessment</td><td></td><td>50%</td></tr>
<tr><td>School</td><td>End level assessment /Theory</td><td></td><td></td><td>20%</td></tr>
</table>

| | | | | |
|---|---|---|---|---|
| Company | End level assessment /Practical | | | 40% |

**Explanation note**:

- Formative assessment in school is scored at 30% and 70% for the Workplace comprehensive assessment at company level. The total max weights 50% per each term.
- Integrated assessment weights 50% per term.
- At the end of the year, the end level assessment weight 60% including 20% theory and 40% practice. The term 1 and 2 will have a share of 40% in the whole year.

## 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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