Republic of Rwanda
Ministry of Education

RTB | RWANDA TVET BOARD

CURRICULUM STRUCTURE



RQF LEVEL 3

TVET CERTIFICATE III
in
PUBLIC WORKS

CBSPWO3001

Kigali, May, 2022

RTB | RWANDA TVET BOARD

CBSPWO3001-TVET CERTIFICATE III

In Public Works

RQF Level 3 CURRICULUM

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List of Abbreviations

RTB	Rwanda Tvet Board
CBA	Competency Based Assessment
CBT	Competency Based Training
RPL	Recognition of Prior Learning
LO	Learning Outcome
PK	Point Kilometrique
HOD	Head Of Department
PWO	Public Works
RPO	Rwanda Plumbers Organisation
NST	National Strategic Transformation
ENABEL	Belgian Development Agency
4IR	Fourth Industrial Revolutions
CAD	Computer Aided Design
CDU	Curriculum Development Unit
CM	Complementary Modules
SJITC	Saint Joseph Integrated Technical College
CV	Curriculum Vitae
DACUM	Developing a Curriculum
EDPRS	Economic Development and Poverty Reduction Strategy
GS&C	General Surveying and Construction
HR	Human Resources
IAP	Industrial Attachment Program
RTDA	Rwanda Transport Development Agency
IPRC	Integrated Polytechnics Regional College
MBO	Management by Objectives
MINEDUC	Ministry of Education
OECD	Organization for Economic Co-operation and Development
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
RQF	Rwandan Education Qualification Framework
RP	Rwanda polytechnic
SOP	Standard Operating Procedures
SSC	Shared Service Centers
SWOT	Strength Weakness Opportunities and Treats
TSS	Technical Secondary School
TVET	Technical and Vocational Education and Training
WHS	Work Health & Safety
UR/CST	University of Rwanda/ College of Science and Technology
RSB	Rwanda Standard Board
STECOMA	Syndicat des Travailleurs des Entreprises de Construction, Menuserie et Artisanat
GEOC	Geothechnical ,Environmental and Organic matters Construction

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7	NDAHAYO Jacques	Nyanza TVET School	Trainer
8	MUSHIMIYIMANA Chantal	SJIP NYAMIRAMBO	Trainer
9	AKINGENEYE Angelique	ACEJ KARAMA	Trainer
10	TUYISHIME Henry	MUSHA ADVENTIST TECHNICAL COLLEGE	Trainer
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FOREWORD

The global rapid changes in the labour market tends do 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 sector with the high employment potential like Public Works among others. In this respect, Rwanda TVET Board, in collaboration with ENABEL, is honored to avail the revised curriculum of Public Works 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 hand 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.

Eng._ Dip. Paul UMUKUNZI

Director General/ RTB

1. GENERAL INTRODUCTION

The curriculum presents a coherent and significant set of competencies to perform the occupation/s of an Assistant road maintainer,Masonry Technician ,Excavation technician, Pavement Technician ,Grading technician ,Road marker and signs technicians,Safety Officer and Unpaved road technician.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 outcomes / activities and resources are included and where applicable, reference standards are mentioned for indicative contents. Standard reference numbers are indicated throughout the text and the full standards' titles in a the reference section.

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

1.1. Rationale of the Qualification

Rwanda's building and construction industry has rapidly grown in the past couple of years with both government and private sector engaged in the construction of buildings and roads infrastructure triggering what is now dubbed as a "construction boom in Rwanda". The construction industry contributes immensely towards the GDP of the Country mainly through direct income and massive employment opportunities generated from various infrastructure projects, rehabilitation and maintenance. It is estimated that the construction sub-sector of the larger industrial sector contributes the highest to the country's industrial GDP. However, there has been a shortage in skilled Construction workers to work in the various formentioned constructions.

Additionaly, there has been an over dependence on imported building materials, which depletes the meager foreign exchange resources while denying the citizens the opportunities of production of the materials locally. In Rwanda, tha aviable amounts of clay, wood/timber, sand and stone are not fully exploited for industrial growth. Nyarugenge District for example, has 700,000 cubic meters of clay ; this shows the richness of natural resources in Rwanda. Whowever, there is a need for detailed geology studies to establish the exact quantities of these construction materials nationwide and establish their lifespan and quality.

The construction materials industry in Rwanda was profiled with a sampled analysis of eleven natural construction materials extractors, seven man-made products manufacturers and twelve contractors. The emerging issues highlight the following opportunities: vast quantities of natural construction materials, plenty of traditional knowledge in construction, a willing human resource, availability of construction industry related to technical institutions, regional integration and political will by the government to revitalize the industry. The constraints and weaknesses to development of this industry were identified as follows: an inefficient , inconsistent supply of raw materials, limited skilled manpower, capital-acquisition difficulties, high competition from other regional actors (from Kenya and Uganda), inconsistent and inadequate energy/power supply and low quality production output.

Therefore, **an Assistant road maintainer**,**Masonry Technician** ,**Excavation technician**, **Pavement Technician** ,**Grading technician** ,**Road marker and signs technicians**,**Safety Officer,** and **Unpaved road technician** workers are the key occupations that need to be addressed to drive the target of the government in construction/Public works Sector.

2. QUALIFICATION DETAILS

2.1. Description

Title:	TVET Certificate 3 In Public Works
Level:	RQF Level 3
Credits:	120
Sector:	Construction and Building Services
Trade:	Public Works
Issue date:	May, 2022

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 various building and construction entreprises where erecting foundation and walls, plastering and screeding pavement are are carried out. Learners 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. Create a Business
4. Communicate simply using English in familiar situations
5. Apply computer literacy
6. Comply with Citizenship values
7. Pratiquer l'activité de communication en français dans le metier
8. Kutumia Kiswahili Wastani
9. Gukoresha IkinyaRwanda kiboneye
10. Apply Algebra and Trigonometry
11. Demonstrate Basics of Chemistry
12. Apply general physics
13. Establish Road Signs, Marking and Crash Barriers
14. Apply Public Work Hygiene and Safety Precautions
15. Perform Technical Drawing
16. Describe Public Works Resources

17. Set Road Alignment
18. Conduct field excavation works
19. Perform masonry works
20. Construct Retaining walls
21. Construct drainage structures
22. Perform Unpaved road maintenance
23. Construct unpaved road
24. Integrate the workplace

2.3 Minimum entry requirements and pathways

The minimum entry requirement to this course is to be mentally fit with an interest in Public Works 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 Education with Outstanding performance in National examination of Ordinary Level in the following subjects: Mathematics, Physics, and Chemistry which are considered as key prerequisites.

A range of other related qualifications equivalent to 9 Years Basic Education with Outstanding performance in the following subjects: Mathematics, Physics, and Chemistry which are considered as key prerequisites.

Progression route of candidates achieving this qualification include:

- TVET Certificate IV in Public Works
- A range of other related TVET Certificate IV qualifications.

2.4 Job related information

This qualification prepares individuals to integrate the construction industry with the professionalization of Road marker. This qualification again offers the opportunity to execute the works as Assistant road maintainer,Masonry Technician, Excavation technician, Pavement Technician ,Grading technician, signs technicians, Safety Officer, and Unpaved road technician while ensuring that safety, security and environmental regulations are respected.

Possible jobs related to this qualification

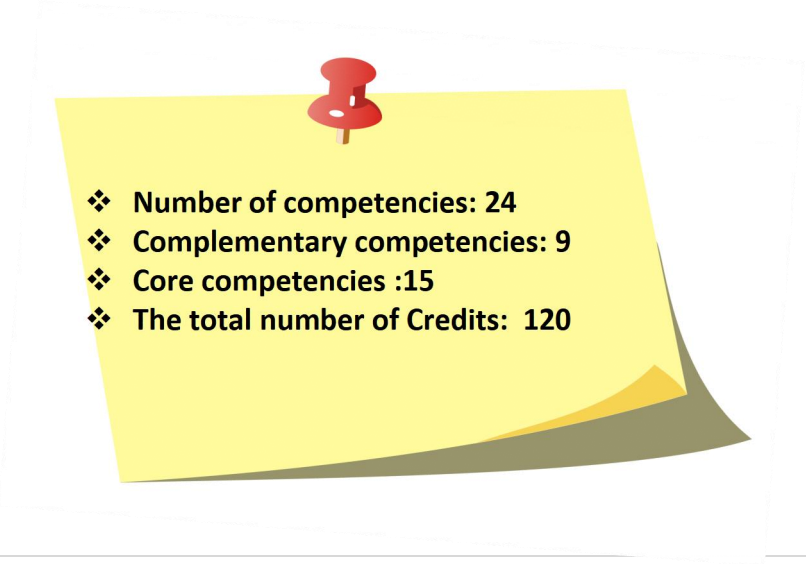
Assistant road maintainer,
Masonry Technician,
Excavation technician,
Pavement Technician,
Grading technician,
Unpaved road technician,
Road marker,
Signs technicians, and
Safety Officer.

2.5 Information about competencies

No	Code	Complementary competencies	Credit
1	**CCMOL302**	Describe the occupation and learning process	**3**
2	**CCMHE302**	Maintain SHE at workplace	**3**
3	**CCMBC302**	Create a Business	**3**
4	**CCMCC302**	Comply with Citizenship Values	**3**
5	**CCMCF302**	Pratiquer l'activité de Communication en Français dans le métier	**3**
6	**CCMEN302**	Communicate simply using English in familiar situations	**3**
7	**CCMCL302**	Apply computer literacy	**3**
8	**CCMKN302**	Gukoresha Ikinyarwandakiboneye	**3**
9	**CCMKK302**	Kutumia Kiswahili Wastani	**3**
Total			**27**

	No	Code	Core competencies	Credit
GENERAL	**1.**	GENAM301	Apply Algebra and Trigonometry	**6**
	2.	GENBC301	Demonstrate Basics of Chemistry	**3**
	3.	GENPY301	Apply general physics	**4**
	4.	PWOTD301	Basic Technical Drawing	**8**
	5.	PWOSH301	Public Works Hygiene and Safety Precautions	**3**

SPECIFIC	**6.**	PWORS301	Establish Road Signs,Marking and Crush Barriers	**4**
	7.	PWOURC301	Construct unpaved Roads	**5**
	8.	PWOFE301	Conduct field excavation works	**3**
	9.	PWODS301	Construct drainage structures	**5**
	10.	PWOMW301	Perform masonry works	**12**
	11.	PWOPR301	Describe Public Works Resources	**3**
	12.	PWOUM301	Perform unpaved road Maintenance	**4**
	13.	PWORW301	Construct Retaining walls	**7**
	14.	PWORA301	Set out Road Alignment	**4**
	15.	PWOIAP301	Integrate the Workplace	**20**
	Total			**91**



- **Number of competencies: 24**
- **Complementary competencies: 9**
- **Core competencies :15**
- **The total number of Credits: 120**

2.6 Allocation of Learning Hours

N0	Module name	Learning Outcome	Theoretical hours	Practical hours	Total hours
1	**Occupation and Learning Process**	LO1: Participate in a team and respect the rules and regulations of training.	3	7	10
		LO 2: Explain the occupation and learning process	1	4	5
		LO3: Respect the facilitation and apply learning methods.	1	4	5
		LO4: Develop personal plans based on self assessment practices	3	7	10
Total hours			**8**	**22**	**30**
2	**Safety, Health and Environment at Workplace**	LO1: Maintain personal hygiene, health and safety	7	8	15
		LO2: Sustain a safe and healthy environment at workplace	3	4	7
		LO3: Ensure environmental sustainability	4	4	8
Total hours			**14**	**16**	**30**
3	**Français**	LO1: Lire un texte lié à son métier	2	6	8
		LO 2:Pratiquer l'expression orale	2	6	8
		LO 3: Accorder les verbes	2	12	14
Total hours			**6**	**24**	**30**
		LO1: Describe basic	5	5	10

		aspects of Entrepreneurship			
4	**Entrepreneurship**	LO2: Assess Business Environment	2	3	5
		LO3: : Generate Business Idea	7	8	15
Total hours			**14**	**16**	**30**
5	**Citizenship**	LO1: Describe Rwanda colonization period	6	2	8
		LO2: : Describe the Independent Rwanda	7	3	10
		LO3: E Patriotism and Heroism in Rwanda	5	1	6
		LO4: Examine leadership and management	5	1	6
Total hours			**23**	**7**	**30**
6	**English**	LO 1: Narrate about familiar events and activities	1	6	7
		LO2: Write short compositions on familiar topics	2	6	8
		LO3: Read and interpreting messages from simple texts and social letter	1	6	7
		LO4: React to common trade-related oral English.	2	6	8
Total hours			**6**	**24**	**30**
		LO1: Apply computer basics	3	8	10
		LO2: Use a current Word processing	1	4	5

		package			
7	**Information and Communication Technology**	LO3: Use current spreadsheet package	1	4	5
		LO4: Use current power point presentations	1	4	5
		LO5: Use Internet/Intranet (outlook)	1	4	5
Total hours			**7**	**23**	**30**
8	**Ikinyarwanda**	LO1: Gukoresha ubuvanganzo gakondo ashyikirana n'abandi	1	5	6
		LO 2: Gukoresha Ikinyarwanda kiboneye agaragaza itandukaniro ry'amazina bwite n'amazina rusange n'imiterere y'isanisha ryo mu bisekuru.	1	5	6
		LO3 :Kugaragaza amategeko y'igenamajwi mu izina mbonera.	1	5	6
		LO 4: Kugaragaza intêgo ya ntera n'amategeko y'igenamajwi.	1	5	6
		LO5: Gukoresha imyandikire ikwiye y'Ikinyarwanda.	1	5	6
9	**Kiswahili Wastani**	LO1: Kutumia msamiati wa Kiswahili katika maandishi na mazungumzo kimsingi	2	8	10
		LO2: Kutumia aina	2	8	10

		za maneno ya lugha ya Kiswahili kimazungumzo na kimaandishi.			
		LO3: : Kutumia nyakati za Kiswahili kimaandishi na kimazungumzo.	2	8	10
Total hours			**6**	**24**	**30**
10	**Applied Physics**	LO1: : Describe basic measurements in physics	4	4	8
		LO2: : Describe Motion in 1-Dimension	2	3	5
		LO3: Analyze motion in two Dimensions	3	3	6
		LO4: Demonstrate electrostatic phenomena	4	4	8
		LO5: Apply Geometric optics	4	3	7
		LO6: : Characterize sources of energy in the world	3	3	6
Total hours			**20**	**20**	**40**
11	**Applied Chemistry**	LO1: Describe the structure of atom and molecules	5	5	10
		LO2: Apply the basics of inorganic chemistry	5	5	10
		LO3: Perform acid base titration	5	5	10
Total hours			**15**	**15**	**30**
12	**Applied Mathematics**	LO1: Solve algebraically or	10	10	20

		graphically linear and quadratic equations or inqualities			
		LO2: Apply matrices in solving simultaneous linear equations	5	5	10
		LO3: Apply fundamentals of trigonometry	7	8	15
		LO4: Apply fundamentals of complex numbers	8	7	15
Total hours			**30**	**30**	**60**
		LO1: Describe the structure of atom and molecules	5	5	10
		LO2: Apply the basics of inorganic chemistry	5	5	10
		LO3: Perform acid base titration	5	5	10
Total hours			**15**	**15**	**30**
13	**Public Works Hygiene and Safety Precautions**	LO1: Maintain personal hygiene	3	2	5
		LO2: Identify construction public works hazards and emergencies at Workplace	6	4	10
		LO3: Maintain construction public works instruments	3	12	15
Total hours			**12**	**18**	**30**
14	**Basic Technical Drawing Application**	LO1: Identify drawing materials, instruments and equipment	2	3	5
		LO2: Use drawing,	3	7	10

		materials, instruments and equipment			
		LO3:Interpret Lines and Symbols	3	7	10
		LO4: Apply drawing scales, dimensions and lettering	6	14	20
		LO5: Draw figures, solids and projections	10	25	35
Total hours			**24**	**56**	**80**
15	**Retaining Wall Construction**	LO1: Plan, and prepare the work requirements	2	3	5
		LO2: Prepare workplace	3	7	10
		LO3: Construct stone masonry retaining wall	3	7	10
		LO4:Construct Gabions	4	11	15
		LO5: Construct honey combs retaining wall	4	11	15
		LO6: Construct a Reinforced concrete retaining wall.	4	11	15
Total hours			**20**	**50**	**70**
16	**Drainage Structures Construction**	LO1: Prepare for work	3	7	10
		LO2: Excavate trenches	3	7	10
		LO3: Construct drainage system structures	6	14	20
		LO4: Apply erosion control method and cleaning	3	7	10
Total hours			**15**	**35**	**50**
17	**Public Work Resources**	LO1: Describe the construction materials used in	3	7	10

		public works			
		LO2: Describe tools, equipment and facilities required for public works	3	7	10
		LO3: Identify team composition for public works	3	7	10
Total hours			**9**	**21**	**30**
18	**Establish Road Signs, Road Marking And Crash Barriers**	LO1: Apply road marking	3	7	10
		LO2: Install road signs	4	11	15
		LU3: Install crash barriers	3	7	10
		LO4: Clean up	2	3	5
Total hours			**12**	**28**	**40**
19	**Field Excavation Works**	LO1: Select materials, tools and equipment	2	3	5
		LO2: Prepare site for excavation	3	2	5
		LO3: Carry out excavation works	5	10	15
		LO4: Clean up construction work place	2	3	5
Total hours			**12**	**18**	**30**
20	**Masonry Works**	LO1: Set out structure	9	21	30
		LO2: construct stone masonry	9	21	30
		LO3: construct brick masonry	9	21	30
		LO4: lay pavers and pitches	9	21	30
Total hours			**36**	**84**	**120**
21	**Road Alignment Setting**	LO1: Prepare for work	2	3	5
		LO2: Set levels	4	11	15
		LO3: Delineate road profiles	6	14	20
Total hours			**12**	**28**	**40**
22	**Construct Unpaved Road**	LO1: Plan and prepare relevant works for unpaved road	4	11	15

		construction			
		LO2: Prepare Subgrade	6	14	20
		LO3: Construct gravel wearing course	4	11	15
Total hours			**14**	**36**	**50**
23	**Industrial Attachment Program (IAP)**	LO1: Apply for internship	10	0	10
		LO2: Demonstrate workplace behavior and attitudes	10	0	10
		LO3: Analyze own professional gaps in line with industry demands	10	0	10
		LO4: Enhance acquired competencies at the workplace	0	170	170
Total hours			**30**	**170**	**200**
24	**Unpaved Road Maintenance**	LO1: Prepare for work.	3	7	10
		LO2: Perform routine maintenance	3	7	10
		LO3: Perform periodic maintenance	3	7	10
		LO4: Perform emergency maintenance	3	7	10
Total hours			**12**	**28**	**40**
Total hours					**1180**

3. TRAINING PACKAGE

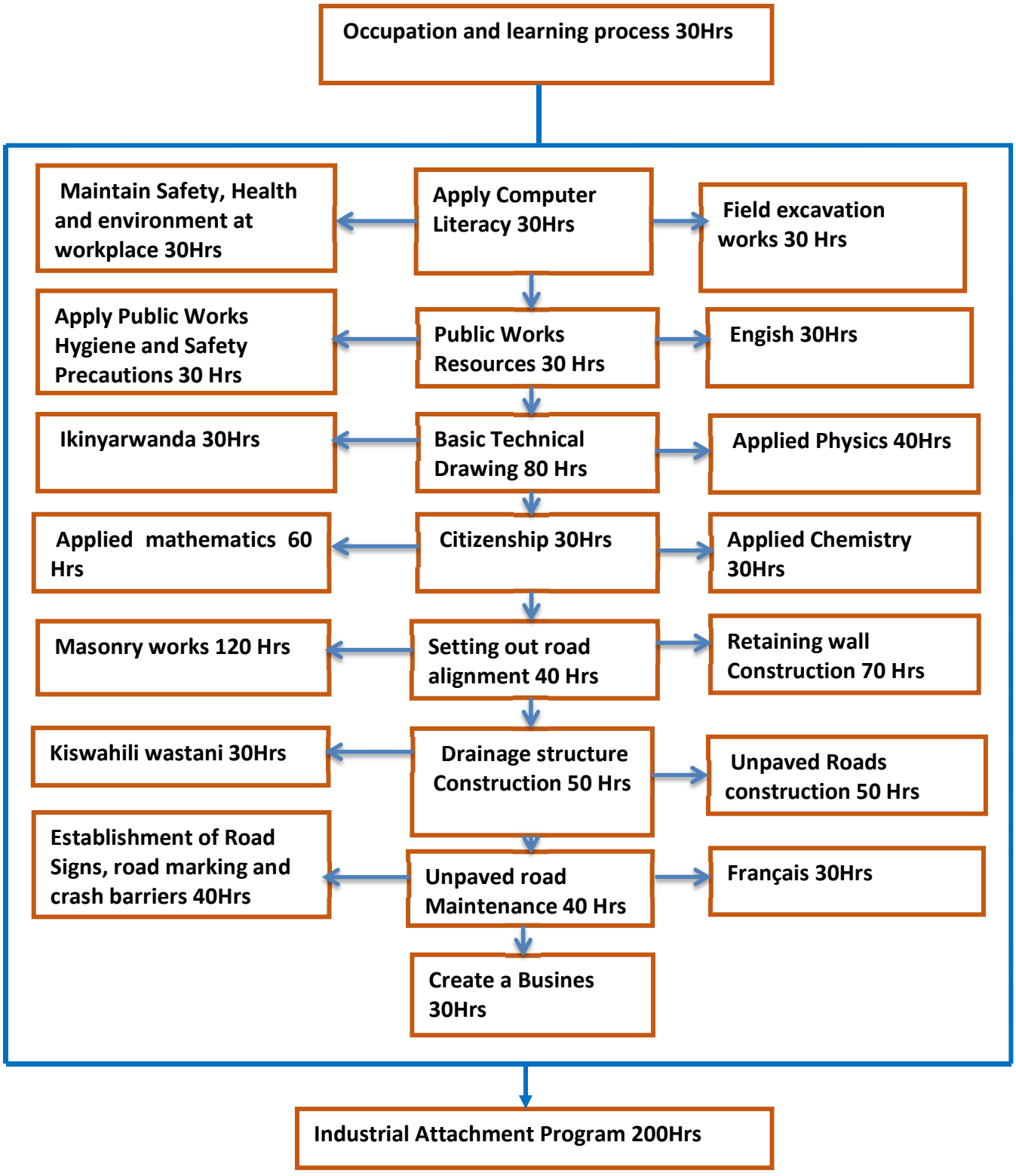
The training package includes the competencies chart, the flowchart, the modules, the course structure, and the assessment guidelines.

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.


Occupation and learning process 30Hrs
Maintain Safety, Health and environment at workplace 30Hrs
Apply Computer Literacy 30Hrs
Field excavation works 30 Hrs
Apply Public Works Hygiene and Safety Precautions 30 Hrs
Public Works Resources 30 Hrs
Engish 30Hrs
Ikinyarwanda 30Hrs
Basic Technical Drawing 80 Hrs
Applied Physics 40Hrs
Applied mathematics 60 Hrs
Citizenship 30Hrs
Applied Chemistry 30Hrs
Masonry works 120 Hrs
Setting out road alignment 40 Hrs
Retaining wall Construction 70 Hrs
Kiswahili wastani 30Hrs
Drainage structure Construction 50 Hrs
Unpaved Roads construction 50 Hrs
Establishment of Road Signs, road marking and crash barriers 40Hrs
Unpaved road Maintenance 40 Hrs
Français 30Hrs
Create a Busines 30Hrs
Industrial Attachment Program 200Hrs

4. 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 rowspan="2">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>

Note:

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. Learing hours assigned to specific module includes the duration assigned to integrated assessment.

GLOSSARY

1. **Assessment**: A process of gathering and judging evidence in order to decide whether a person has attained a standard of performance.
2. **Assessment criteria:** Statements which describe performances and place them in context with sufficient precision to allow valid and reliable assessment.
3. **Best practice:** Management practices and work processes that lead to outstanding or top-class performance and provide examples for others.
4. **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.
5. **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.
6. **Competency-based assessment (or CBA):** The gathering and judging of evidence in order to decide whether a person has achieved a standard of competency.
7. **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.
8. **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.
9. **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.

10. **Credit**: The acknowledgement that a person has satisfied the requirements of a module.
11. **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.
12. **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.**
13. 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.
14. **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.
15. **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.
16. **Generic modules**: Modules leading to the attainment of complementary competencies.
17. **Informal education:** The acquisition of knowledge and skills through experience, reading, social contact, etc.
18. **Internship**: An opportunity for a learner to integrate career related experience by participating in planned, supervised work.
19. **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.
20. **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.

21. **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.
22. **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.
23. **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.
24. **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.
25. **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
26. **Module**: A unit of training which corresponds to one competency and which can be completed on its own or linked to others.
27. **Occupation**: The principal business of one's life.
28. **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.
29. **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.
30. **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.
31. **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.
32. **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).

33. **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
34. **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.
35. **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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