QUALIFICATION SPECIFICATION SECTION A						
QUALIFICATION DEVELOPER	Ministry of Employment, Labour, Productivity, and Skills Development					
TITLE	Certificate III in Automotive Body Repair and Refinishing			**NCQF LEVEL**	3	
FIELD	Manufacturing, Engineering and Technology	**SUB-FIELD**	Automotive Body Repair & Refinishing			
New qualification	√	Review of existing qualification				
SUB-FRAMEWORK	General Education		TVET	√	Higher Education	
QUALIFICATION TYPE	Certificate	√	Diploma		Bachelor	
	Bachelor Honours		Master		Doctorate/ PhD	
CREDIT VALUE					**40 credits**	

RATIONALE AND PURPOSE OF THE QUALIFICATION

Rationale

The Botswana Vision 2036 states that development of the human capital and the informal sector and the micro and small enterprises (MSES) are essential in achieving the VISION 2036 pillars, Sustainable Economic Development and Human and Social Development. Although Botswana has been fortunate to experience unprecedented economic growth since independence, this has not generated enough jobs to reduce unemployment. The most severely hit group amongst the unemployed is the youth, who account for about 51.7 % of the total unemployed, with the 15-19 age group most affected (Statistics Botswana 2018).

The Botswana Education and Training Sector Strategic Plan (ETSSP 2015-2020) marks a significant milestone in our collective efforts as a nation to bring about a more diversified, knowledge-based economy. Through a planned and careful development of human capital, the ETSSP seeks to refocus our education and training towards fulfillment of social and economic aspirations identified in our Revised National Policy on Education (RNPE)1994, the National Development Plan 11, Vision 2036 and as well as the Millennium Development Goals. In particular, the ETSSP is intended to strengthen the match between qualifications and Labor market requirements, thereby ensuring that education and training outputs are more closely aligned to socio economic development needs of the country. In line with this strategic goal, the Human Resource Development Council (HRDC 2016) report on top occupations in demand has identified mechanics inclusive of heavy plant, hydraulics, diesel and auto electrical as some of the priority skills for Transport and Logistics and Mining Mineral Energy and Water Resources Sectors. It is important to develop this qualification at this level for vertical progression of skilled manpower in Auto Body Repair field as it is amongst the top priority fields in the motor industry.

Purpose

The purpose of this qualification is to produce graduates with Knowledge, Skills, and Competences to:

- Perform a range of functions including the use of tools and equipment.
- Perform basic material removal processes.
- Apply basic fastening and joining techniques.
- Read and create engineering drawings.
- Understand the use of metallic and non-metallic materials.
- Clean machinery and equipment in accordance with manufacturer's specifications.
- Dismantle, assemble, and align panels, equipment, and machinery.
- Build and maintain basic electrical and electronic circuits.
- Spray paint according to job requirement.
- Service vehicle suspension system.

ENTRY REQUIREMENTS (including access and inclusion)

- NCQF Level 2 or any equivalent qualification.
- Candidates with relevant prior learning may be considered for admission and or exemption in line with National Recognition of Prior Learning (RPL) and CATS policies.

QUALIFICATION SPECIFICATION	SECTION B
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
1. Communicate with clients, colleagues and others using appropriate forms of communication techniques.	1.1 Use written, verbal, non-verbal communication appropriate to the target audience. 1.2 Interpret stipulated instructions or requirements. 1.3 Apply information acquired in the performance of tasks or discussions with other people. 1.4 Apply relevant definitions, terminology, abbreviations, and language. 1.5 Present information using appropriate language and formats. 1.6 Construct clear sentences to produce a written logical and coherent piece of writing. 1.7 Use appropriate presentation formats and styles of writing to produce error free business documents.
2. Use Information Communication technology (ICT) for information retrieval and processing.	2.1 Use ICT responsibly and ethically. 2.2 Manage information using ICT. 2.3 Organize and synthesis information using ICT. 2.4 Implement data loss prevention strategies using ICT. 2.5 Present information in a variety of formats using ICT.
3. Select and use appropriate tools and equipment for an engineering application in accordance with job specification.	3.1 Examine job specification to determine the tools and equipment to be used in relation occupation safety code. 3.2 Select appropriate tools and equipment to be used in line with the job requirements. 3.3 Carry out the tasks in line with job specification. 3.4 Service and maintain tools and equipment in accordance with Original Manufacturers Specification (OMS) where applicable. 3.5 Perform quality checks on work done and make improvements where needed. 3.6 Clean and tidy up the work area in accordance with organizational requirements.

4. Perform measurements on engineering components according to job specifications in line with adopted International System Organization (ISO).	4.1 Examine job specification to determine the tools and equipment to be used. 4.2 Select appropriate measuring instruments according to specified limits, fits and tolerance on the job. 4.3 Plan and prepare for work in the workplace in accordance to job specification. 4.4 Select and state the importance of correct operating specifications for limits, fits and tolerances in the engineering environment. 4.5 Measure all dimensions in accordance with standard specifications and tolerances by using various precision measuring instruments. 4.6 Record, compare and confirm measurements results in line with standard specifications. 4.7 Clean and tidy up the work area in accordance with organizational requirements.
5. Apply knowledge of metallic and non-metallic materials and their properties in the selection of materials for specific projects.	5.1 Examine the nature of work to be carried out to determine types of materials to be used. 5.2 Carry out simple tests to distinguish between metallic and non-metallic materials where applicable. 5.3 Clean and tidy up the work area in accordance with organizational requirements.
6. Perform basic metal removal processes in a specified job.	6.1 Examine the nature of work to be done inclusive of material to be worked on to determine tools and measuring instruments to be used. 6.2 Select and use tools and equipment in line with job specification. 6.3 Carry out tasks as per job specification, adhering to health, safety, and quality standard. 6.4 Perform quality checks on the job done until specification is met. 6.5 Clean and tidy up the work area in accordance with organizational requirements.
7. Apply basic fastening and joining techniques in a specified job.	7.1 Examine the nature of work to be done inclusive of material to be worked on to determine fasteners, tools, equipment to be used and joining techniques to be applied.

	7.2 Select and use appropriate fasteners and joining techniques for specific purposes. 7.3 Carry out tasks as per job specification, adhering to health, safety, and quality standard. 7.4 Perform quality checks on the job done. 7.5 Clean and tidy up the work area in accordance with organizational requirements.
8. Carry out simple forming techniques in the fabrication of projects.	8.1 Examine the job specification to determine materials, forming techniques, tools, and equipment to be used. 8.2 Select appropriate materials, forming techniques, tools, and equipment in line with the job specification. 8.3 Carry fabrication of the project in accordance with established codes of practice and job specification. 8.4 Perform quality checks on work done and make improvements where needed. 8.5 Clean/tidy up the work area in accordance with organizational requirements.
9. Apply knowledge and skills of corrosive preventative technique on metals in accordance with job specification.	9.1 Plan and prepare to undertake basic painting in accordance to job specification. 9.2 Assess surface condition in accordance with legislative requirements, workplace procedures and manufacturer's specification. 9.3 Prepare surface according to job requirements. 9.4 Mix paint in accordance with manufacturer's specification. 9.5 Apply paint in accordance with job requirements. 9.6 Clean, check, maintain and store equipment in accordance with the organization's procedures.
10. Clean and finish the interior, exterior of machinery in accordance with manufacturers specification.	10.1 Examine the nature of work to be done to determine materials, tools, and equipment to be used. 10.2 Select appropriate materials, tools, and equipment to carry out the task.

	10.3 Perform tasks as per job specification, adhering to health, safety, and quality standard as well as established codes of practice. 10.4 Perform quality checks on the job done and make improvements as needed. 10.5 Clean and tidy up the work area in accordance with organizational requirements.
11. Dismantle and assemble machinery.	11.1 Examine the nature of work to be done to determine tools and equipment to be used in dismantling and assembling. 11.2 Identify parts of equipment and machinery to be dismantled and assembled. 11.3 Select appropriate tools and equipment to carry out the task. 11.4 Perform tasks as per job specification, adhering to health, safety, and quality standard. 11.5 Perform quality checks on the job done. 11.6 Clean and tidy up the work area in accordance with organizational requirements.
12. Build and maintain basic electrical and electronic circuits.	12.1 Examine the job specification to determine materials, tools, and equipment to be used. 12.2 Select appropriate materials, tools, and equipment to be used to design and build the circuit according to the job specification. 12.3 Construct electrical circuits on panel board according to established codes of practice and job specification. 12.4 Test electrical circuits on panel board according to job specification. 12.5 Perform fault finding and rectify faults accordingly on electrical circuits. 12.6 Clean and tidy up the work area in accordance with organizational requirements.
13. Perform removal, refitting and alignment of panels, bearings and pulleys on machinery and equipment.	13.1 Examine the work to be done to determine tools and equipment to be used. 13.2 Select tools and equipment to be used in line with the nature of work to be done. 13.3 Perform tasks as per job specification adhering to SHER and quality standard.

	13.4 Perform quality checks on the work done in line with job specification and make improvements where necessary. 13.5 Clean and tidy up the work area in accordance with organizational requirements.
14. Read and draw Engineering Drawings for specific purpose.	14.1 Analyze the drawings to be done to determine appropriate drawing equipment to be used. 14.2 Select the appropriate drawing equipment to be used. 14.3 Produce drawings according to task specification; adhere to health, safety, and quality standard. 14.4 Perform quality checks on the job done for adherence to quality standard. 14.5 Clean and tidy up the work area in accordance with organizational requirements.
15. Implement maintenance schedule in accordnance with orgnaisational requirements.	15.1 Examine the nature of maintenance work to be carried out to determine the materials, tools, and equipment to be used. 15.2 Obtain the required materials, tools, and equipment in line with the job requirements. 15.3 Prepare and carry out maintenance work in accordance with job specifications and adhere to SHER and MOS. 15.4 Perform necessary tests to confirm functionality. 15.5 Clean and tidy up the work area in accordance with organizational requirements. 15.6 Keep records and report to immediate supervisor as needed.
16. Perform maintenance of suspension, road wheels and tires in accordance with manufacturer's specification.	16.1 Examine the nature of maintenance work to be carried out to determine the materials, tools, and equipment to be used. 16.2 Select materials, tools, and equipment in line with the job requirements. 16.3 Carry out maintenance work in accordance with tasks specifications. 16.4 Perform quality checks and adhere to SHERQ. 16.5 Clean and tidy up the work area in accordance with organizational requirements.

	QUALIFICATION STRUCTURE SECTION C		
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	**Title**	**Level**	**Credits**
	Communication skills	3	3
	Information and Communications Technology (ICT)	3	3
CORE COMPONENT Subjects / Units / Modules /Courses	Basic metal work	3	14
	Automotive Practice	3	10
	Engineering Materials	3	4
	Engineering drawing	3	6
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	N/A		
		Total	**40**

Rules of combinations, Credit distribution (where applicable):

A candidate is required to achieve a total of 40 credits inclusive of 6 credits for fundamental courses and 34 credits for core courses to be awarded the qualification.

ASSESSMENT AND MODERATION ARRANGEMENTS

ASSESSMENT

All assessments, formative and summative, leading/contributing to the award of credits or a qualification should be based on learning outcomes and/or sub-outcomes.

Formative assessment

The contribution of formative assessment to the final grade shall be **60%**.

Summative assessment

Learners may undergo assessment including written and practical and simulated projects. The final examination for each course contributes **40 %** of the final mark for that course.

MODERATION

Both internal and external moderation will be conducted in accordance with applicable policies and regulations.

Assessment and moderation shall be conducted by registered and accredited assessors and moderators.

RECOGNITION OF PRIOR LEARNING (if applicable)

- Learners may submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable university RPL policies and relevant national-level policy and legislative framework. Implementation of RPL shall also be consistent with requirements, if any, prescribed for the field or sub-field of study by relevant national, regional, or international professional bodies.

- Learners with relevant prior learning through formal, informal, and non-formal education shall be considered for award through Recognition of Prior Learning (RPL).

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation Graduates of this qualification can pursue the following:

- Certificate III in Machine Fitting.
- Certificate III in Auto Mechanics.
- Certificate III in Maintenance Fitting.
- Certificate III in Welding and Fabricating.

- Certificate III in Borehole Mechanics.
- Certificate III in Heavy Plant Mechanics.

Vertical Articulation

The holder of these NCQF level 3 qualifications may progress to NCQF level 4 or equivalent on the following fields:

- Certificate IV in Heavy Plant Mechanics.
- Certificate IV in Auto body repair and refinishing.
- Certificate IV in Welding and fabrication.
- Certificate IV in Borehole Mechanics.
- Certificate IV in Fitting and machining.
- Certificate IV in Maintenance fitting.
- Certificate IV in Air conditioning and Refrigeration.

EMPLOYMENT PATHWAYS

On completion of the course the candidates can either get employed or become a self-employed Entrepreneur in any one of the following fields:

a) Wage employment

- Spare Parts Sales Assistant / Manufacturer's Representative.
- Private Fleet and Garages Attendant.
- Workshop Storekeeper.

b) Self –employment

- Spare Parts Dealer.
- Spare Parts Salesman.

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification

A learner is required to achieve the stipulated minimum of 40 credits inclusive of 6 credits for the fundamental and 34 credits for core courses to be awarded Certificate III in Automotive Body Repair and Refinishing.

Certification

Learners meeting prescribed requirements will be awarded Certificate III in Automotive Body Repair and Refinishing in accordance with standards prescribed for the award of the qualification and applicable policies.

REGIONAL AND INTERNATIONAL COMPARABILITY

1.South Africa Qualification Authority (SAQA); (SGB Vehicle Maintenance) National Certificate in Automotive Spray Painting (NQF Level 3 worth 120 credits): this qualification is intended to develop knowledge, skills, and competencies in: Communication, Problem solving, Use and maintenance of workshop tools and equipment, Application of paint finish, Information management, Use of science and Technology. A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working. The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together. During integrated assessments, the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies. Learners must attain the following credits:

- Fundamental unit which are compulsory with 36 Credits
- Core unit which are compulsory with 63 Credits.
- Additional Elective unit accounting for 21 credits must be selected.

2. **Government of India Ministry of Skill Development and Entrepreneurship: Auto Body Repair,** Denting & Painting seeks to develop knowledge, skills, and competencies in applying safe working practices in an automotive workshop, complying environment regulations and housekeeping in the workshop, removing and refitting body panels, doors, floors, wheel boxes and fenders, wind shield glasses, carrying out body repair by different welding processes on a vehicle, carrying out minor

repair of auto body-cut open, beat out, carrying out refinishing operation on vehicle. Assessment strategies for this qualification include theoretical and practical components. Candidates are required to achieve a minimum of 600 credits inclusive of fundamentals units, core units and electives. Holders of this qualification may pursue other qualification in cognate areas, for multi skilling purposes.

3. **Australia:**

The Certificate in Automotive Vehicle Body Repair is a 3-year course for artisans to learn how to repair and paint vehicles. The qualification has 2 specialization areas: one for spray painting and one for panel beating. Both specialization areas comprise less than 1200 notional learning hours, but are spread out over 3 Levels, with core units being specified at the entry level (Level 2). There are a range of elective units that may be selected from different categories, but the rules of combination indicate that all units must be selected, thereby not allowing the learner any choice in learning. The qualification aims at targeting competence at artisan level only with no recognition for achievement of less than the whole qualification. 1200 notional learning hours is an equivalent of 120 Credits.

Summary

Generally, the three programs studied are similar in that all of them cover main exits outcomes that are almost the same; Communication, Problem solving, Use and maintenance of workshop tools and equipment, Application of paint finish, Information management, applying safe working practices in an automotive work shop, complying environment regulations and housekeeping in the work shop, removing and refitting body panels, doors, floors, wheel boxes and fenders, wind shield glasses, carrying out body repair by different welding processes on a vehicle, carrying out minor repair of auto body-cut open, beat out, carrying out refinishing operation on vehicle.

The proposed qualification generally compares well with the SAQA program or qualifications studied in terms of content scope, most of exit outcomes, modules covered to be achieved before assessment. What makes this qualification unique from the ones studied is that it emphasizes practical aspects than the other three. Moreover, the qualification has got a wide range of modules that covers metal work and basic mechanics as compared to that of SAQA, Australia and India as derived from the industry

recommendations. Total credits that qualify one for the award is 40 Credits which is in line with the BQA standard.
REVIEW PERIOD
This program shall be reviewed every five **(5)** years.