

Smartphone Repair Course FINAL REPORT 2019

Report presented to the
Department of Information Systems
University of Cape Town

Prepared by

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Prepared For

Whizz ICT



UCT KNOWLEDGE CO-OP

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PART 1: BUSINESS CASE AND PROJECT OUTCOMES

1.1. INTRODUCTION

Whizz ICT is a business heavily invested in community upliftment. The founder, Thembinkosi, speaks about how dear the community is to him when he speaks about the origin of Whizz ICT. He was one of the only members of the community with a computer and printer at home and would find that his children would make use of it to type out CVs, assignments and other documents for community members who did not have access to proper facilities. This allowed him to recognize a need in the community and using his knowledge and experience in the development sector, Thembinkosi expanded beyond typing on behalf of someone else.

In Khayelitsha, there is a great number of people who struggle to utilize their technological devices. A simple task such as updating WhatsApp, downloading an application or sending an email becomes daunting or even impossible for them to complete on their own. This forces them to waste money by getting a third party to complete these tasks for them. This provided an opportunity for Whizz ICT to challenge the digital divide in the community and uplift the community members by teaching them to complete these tasks by themselves. Perhaps strengthening their current teaching facilities and methods will encourage community members to complete a basic software training course.

ICT is used as a tool to enhance the development of the community. Research and surveys revealed that computer access was very low, with little to no guidance being provided to users. In 2008, The Whizz ICT was developed to address these issues. Improving from the operations in a small shack to become a venture that is both development and business focused. The business aspect comes in the form of the services provided such as photo copying, internet access and the development in the form of various cell phone and computer training offered. Donations such as computer and furniture slowly allowed the business to grow into what it is today.



Figure 1 Khayelitsha

1.2. CURRENT SITUATION OF CONCERN AND OPPORTUNITY STATEMENT

Whizz ICT is not the only business that provides ICT courses within the community. Due to the lack of accreditation and overall look of the brand, people view these courses as less valuable and trustworthy. These potential customers are then lost to competitors.

Community members also need to be made aware of the benefits available from taking these courses. They are able to use the skills learned to not only become self-reliant and comfortable when using technology in different environments but also, they can now act as a point of reference for family and friends who still struggle.

Mr. Thembinkosi hopes to have a smartphone repair course running at Whizz ICT so that community members that attend the classes for this course, can leave with certification. Unfortunately, Whiz ICT is currently understaffed, with staff that don't have the needed qualifications to teach such a course. Whizz ICT also is under resource, and does not have the finances nor the adequate equipment and tools to start teaching the smartphone repair course. Other needed resources include learning material that is adequate and relevant to the course topic.

1.3. BUSINESS OBJECTIVES

- Expand current printing and internet access, as well as computer training.
- Focus on people's practical skills and improve their computer literacy.
- Provide accreditation for their cell phone repair training course.
- Being a profitable organization while still catering for the community's needs and financial constraints.
- Provide sufficient cell phone repair training for the people of the community at a reasonable price that students can maintain through the duration of the course.
- Obtain funds to aid the running of the cell phone repair training course. This would cover aspects such as learning material and equipment.
- Provide theory as well as practical training to students taking the course through the duration of the course.

1.4. ASSUMPTIONS AND CONSTRAINTS

Constraints

- **Budget:** Whizz ICT does not charge a high price for the services they provide and as a result they don't have a large amount of disposable income. This put a constraint on how well the solution can be implemented in terms of providing excellent learning material and equipment.
- **Schedule:** Since we only given a few months (one semester) to find a solution to the problems that Whizz ICT are facing, we are limited in how much time we can spend on making sure that each phase of the accreditation process is taken into account and that Whizz ICT does actually get approval.
- **Resources:** Resources such as actual smartphones and even qualified staff are limited. This limits our solutions and getting to complete the project.
- **Meeting stakeholders:** Being students, we are constrained by the availability of funds to travel to and meet with external stakeholders. These stakeholders are also not always available when we might need to contact them to answer urgent questions that may arise throughout the duration of the project.
- **Recommended solution:** The recommended solution does not provide Whizz ICT with the actual accreditation, but rather the direction to take in order to have the course accredited.

Assumptions

- The community has actively shown an interest in a course that will empower them with a qualification in cell phone repairs.
- We assume UCT will be willing to assist Whizz ICT in the form of providing funds that can be used for resources.
- Whizz ICT is registered as an education provider in terms of the applicable legislation at the time of application for accreditation.
- Whizz ICT has the necessary photocopying facilities available to print any digital resources
- Whizz ICT has the necessary security procedures in-place to secure any resources obtained during the project

1.5. EXTERNAL STAKEHOLDER ANALYSIS

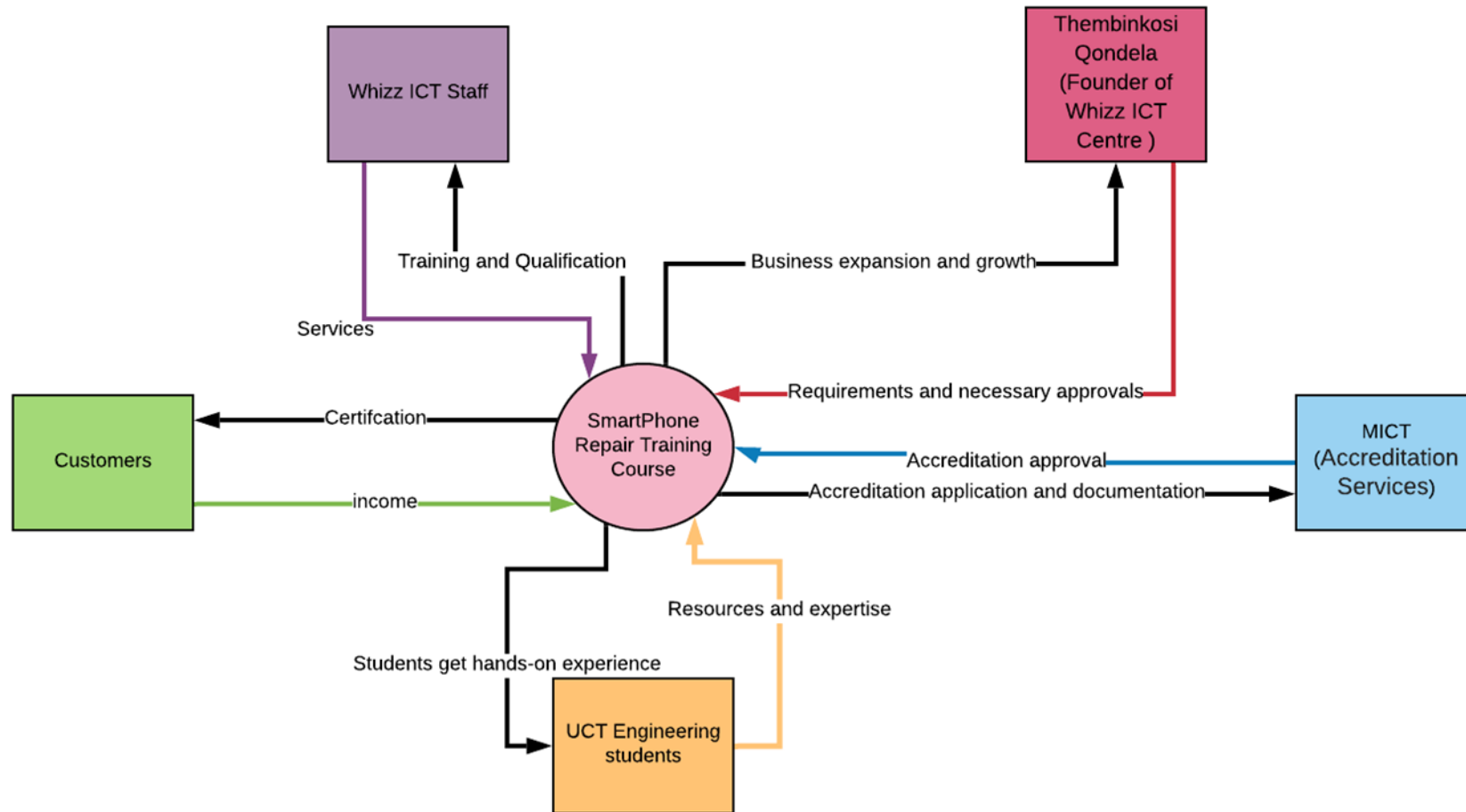


Figure 2 Context Diagram

1.6. ALTERNATE SOLUTIONS

OPTION 1

WORK WITH WHAT YOU HAVE

Criteria	Solution
Qualified staff	Train current staff
Curriculum	Based on what we can teach (Core unit standards)
Learners' support (materials)	Free online resources
Financial resources	Minimal cost involved so not much will be needed
Physical resources	Theory-only based approach; one kit used to demo
Benefits	Decreased expenditure
Risks	Accreditation is refused due to lack of relevant resources Low community support

Table 1 Solution 1

Our first solution is arguably one of the simplest to implement. We aim to meet all the required objectives while making use of the resources and facilities currently available to Whizz ICT. However, even though we will be restricting how much financial resources are required from Whizz ICT, we will need them to pay for some aspects – mainly, the staff training. This is because we will need to train the current teaching staff so that they can be qualified to teach the respective courses. The course will be unlikely to be accredited if one of the facilitators is teaching a course that has NQF level higher than what they have achieved themselves. Since Whizz ICT can only invest so much on training, we will only ensure that every instructor has an NQF level of at least 2. This allows them to teach a portion of the **Core** unit standards from the Electronics qualification. The course will be structured around free, online materials that can be given to the learners. Practical components will be kept to a minimum as there not much physical resources available. This is another way in which expenditure is being reduced.

The outcome of this solution is an accredited course. The course will have a small number of MICT SETA accredited unit standards incorporated into it thus allowing it to be an accredited mini course.

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Core	115230	Demonstrate knowledge of electrical and electronic components	Level 2	NQF Level 02	3
Core	115234	Demonstrate knowledge of electrical safe working practices	Level 2	NQF Level 02	2
Core	113877	Understand fundamentals of electricity	Level 2	NQF Level 02	8
Core	7427	Use and maintain hand tools and equipment	Level 2	NQF Level 02	3
Core	10270	Construct Basic Electronic Circuits	Level 3	NQF Level 03	4
Core	253074	Demonstrate an understanding of basic digital circuits	Level 3	NQF Level 03	6
Core	253054	Perform basic electrical circuit calculations	Level 3	NQF Level 03	10
Core	253094	Perform electronic fault-finding	Level 3	NQF Level 03	3
Core	253334	Test and replace basic electronic components	Level 3	NQF Level 03	15
Core	114406	Understand basic electronic theory and components	Level 3	NQF Level 03	4
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	NQF Level 03	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	NQF Level 03	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	NQF Level 03	4
Fundamental	119457	Interpret and use information from texts	Level 3	NQF Level 03	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	NQF Level 03	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	NQF Level 03	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	NQF Level 03	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	NQF Level 03	5
Elective	12035	Apply personal safety practices on a wastewater treatment works	Level 2	NQF Level 02	4
Elective	113863	Apply soldering techniques	Level 2	NQF Level 02	2
Elective	114605	Carry out soldering and de-soldering procedures	Level 2	NQF Level 02	3
Elective	14928	Demonstrate knowledge of basic concepts of telecommunications	Level 2	NQF Level 02	7
Elective	337140	Adjust and maintain the production/assembly process	Level 3	NQF Level 03	7
Elective	9532	Demonstrate basic knowledge of computers	Level 3	NQF Level 03	6
Elective	244504	Describe and explain the principles of logistics support in a specific context	Level 3	NQF Level 03	6
Elective	115242	Draw and interpret electrical diagrams	Level 3	NQF Level 03	3
Elective	115245	Fabricate aircraft electrical looms and harnesses	Level 3	NQF Level 03	10
Elective	244321	Use elementary electronics as applied to electronic systems	Level 3	NQF Level 03	4
Elective	337139	Conduct sound measurement	Level 4	NQF Level 04	10
Elective	116329	Determine common electronic faults and conduct generic electronic tests	Level 4	NQF Level 04	3
Elective	119256	Inspect and test electrical circuits	Level 4	NQF Level 04	6

Figure 3 Solution 1 Unit Standards

OPTION 2

UCT

Criteria	Solution
Qualified Staff	The current staff will be trained in order to meet the required qualification. Meanwhile, post-graduate engineering students will assist in facilitating the course.
Well-drawn Curriculum	The curriculum will be based on the post-graduate students' qualifications. The Unit Standards to be aligned will therefore be from the core and fundamental sections
Learner's support material	Old/unused books can be donated to or loaned from Whizz ICT.
Financial resources	A fundraising can be held at the UCT's plaza in order to help the Khayelitsha's community. Fund raised will be used in order to get quality physical resources and support material.
Physical resources	Fund raised will be used to buy equipment
Benefits	Staff can receive training while post-graduates facilitate the course to keep operation running
Risks	The money raised from the crowdfunding is not sufficient. UCT might not be willing to cooperate.

Table 2 Solution 2

Our second solution tried to expand on the limitations encountered in the first. Since training the Whizz ICT staff could be a very long and potentially expensive process, we need to allow for operations during the interim. In order to accomplish this, Whizz ICT needs to make use of its existing relationship with UCT to try and incorporate them further in their course. If they are able to obtain assistance from the EBE Faculty at UCT they can have postgraduate or 3rd year students to act as instructors for the interim. They are qualified enough to facilitate the course while the actual staff receives training to replace them once the training has completed. This makes clever use of the time so that UCT doesn't have to frequently deploy students and students do not become overwhelmed by the pressure of the teaching. If students are deployed once during the course, by examining the number of students we can have a few months of training until the staff can takeover. Since UCT makes use of a number of textbooks. Whizz ICT could loan or perhaps receive old textbooks from UCT or still make use of free, online textbooks. Whizz ICT can also potentially raise funds through UCT. Students can be made aware of the situation happening and choose to donate any amount to help assist the program. This money can then be used to purchase the necessary equipment to conduct the course and also to supplement the costs of staff training and learning materials.

The outcome of this solution is an accredited course. The course will cover both the core and fundamental MICT SETA accredited unit standards thus allowing it to be an accredited short course.

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Core	115230	Demonstrate knowledge of electrical and electronic components	Level 2	NQF Level 02	3
Core	115234	Demonstrate knowledge of electrical safe working practices	Level 2	NQF Level 02	2
Core	113877	Understand fundamentals of electricity	Level 2	NQF Level 02	8
Core	7427	Use and maintain hand tools and equipment	Level 2	NQF Level 02	3
Core	10270	Construct Basic Electronic Circuits	Level 3	NQF Level 03	4
Core	253074	Demonstrate an understanding of basic digital circuits	Level 3	NQF Level 03	6
Core	253054	Perform basic electrical circuit calculations	Level 3	NQF Level 03	10
Core	253094	Perform electronic fault-finding	Level 3	NQF Level 03	3
Core	253334	Test and replace basic electronic components	Level 3	NQF Level 03	15
Core	114406	Understand basic electronic theory and components	Level 3	NQF Level 03	4
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	NQF Level 03	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	NQF Level 03	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	NQF Level 03	4
Fundamental	119457	Interpret and use information from texts	Level 3	NQF Level 03	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	NQF Level 03	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	NQF Level 03	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	NQF Level 03	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	NQF Level 03	5
Elective	12035	Apply personal safety practices on a wastewater treatment works	Level 2	NQF Level 02	4
Elective	113863	Apply soldering techniques	Level 2	NQF Level 02	2
Elective	114605	Carry out soldering and de-soldering procedures	Level 2	NQF Level 02	3
Elective	14928	Demonstrate knowledge of basic concepts of telecommunications	Level 2	NQF Level 02	7
Elective	337140	Adjust and maintain the production/assembly process	Level 3	NQF Level 03	7
Elective	9532	Demonstrate basic knowledge of computers	Level 3	NQF Level 03	6
Elective	244504	Describe and explain the principles of logistics support in a specific context	Level 3	NQF Level 03	6
Elective	115242	Draw and interpret electrical diagrams	Level 3	NQF Level 03	3
Elective	115245	Fabricate aircraft electrical looms and harnesses	Level 3	NQF Level 03	10
Elective	244321	Use elementary electronics as applied to electronic systems	Level 3	NQF Level 03	4
Elective	337139	Conduct sound measurement	Level 4	NQF Level 04	10
Elective	116329	Determine common electronic faults and conduct generic electronic tests	Level 4	NQF Level 04	3
Elective	119256	Inspect and test electrical circuits	Level 4	NQF Level 04	6

Figure 4 Solution 2 Unit Standards

OPTION 3
OUTSOURCE

Criteria	Solution
Qualified staff	Hire temporary qualified technicians using investor money
Curriculum	The full National Certificate qualification (Core, Fundamental with Electives)
Learners' support (materials)	Textbooks can be purchased
Financial resources	Collaboration with investor provides funding
Physical resources	Purchase 3-4 toolkits to help with the repair course
Benefits	Highest chance of accreditation approval Students leave with a qualification
Risks	MTN might require a certain number of sales to agree to collaborate

Table 3 Solution 3

The most ideal solution would be to seek funding to support Whizz ICT's initiatives. One of the most likely sponsors is MTN. MTN is launching two new products on the market this year namely a smartphone and an instant messaging service over their network. These products are aimed at low-income consumers and Whizz ICT will be able to provide a unique marketing strategy to MTN to be able to target the Khayelitsha community. Whizz ICT will be conducting their basic user training using the instant messaging service as the prime application for telecommunications. In addition to this, the booklets provided by Whizz ICT will be branded with MTN and their smartphone will be featured in the demonstration pictures. In return for this, MTN will provide the initial funding for the smartphone repair course. This partnership can also be extended to pipeline for MTN repair technicians. MTN can frequently contact Whizz ICT if they need repair technicians and since they sponsored the course, their technicians will be allowed to attend the Whizz ICT course at no charge. The funding received from MTN can also be used to hire temps to facilitate the course while the Whizz ICT staff receive training in order to be qualified to teach the course thereafter. It can also be used to purchase textbooks which can be photocopied to hand-out to the students as they come for each lesson. To assist the practical components of the course, we will purchase 3-4 cell phone repair toolkits that will be used by the students as well as the demonstrator.

The outcome of this solution is an accredited cell phone repair training course. The course will cover the core, fundamental and elective MICT SETA unit standards required to culminate into a 120-credit full course. This will allow participants to leave with a qualification in Electronics (59569).

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Core	115230	Demonstrate knowledge of electrical and electronic components	Level 2	NQF Level 02	3
Core	115234	Demonstrate knowledge of electrical safe working practices	Level 2	NQF Level 02	2
Core	113877	Understand fundamentals of electricity	Level 2	NQF Level 02	8
Core	7427	Use and maintain hand tools and equipment	Level 2	NQF Level 02	3
Core	10270	Construct Basic Electronic Circuits	Level 3	NQF Level 03	4
Core	253074	Demonstrate an understanding of basic digital circuits	Level 3	NQF Level 03	6
Core	253054	Perform basic electrical circuit calculations	Level 3	NQF Level 03	10
Core	253094	Perform electronic fault-finding	Level 3	NQF Level 03	3
Core	253334	Test and replace basic electronic components	Level 3	NQF Level 03	15
Core	114406	Understand basic electronic theory and components	Level 3	NQF Level 03	4
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	NQF Level 03	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	NQF Level 03	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	NQF Level 03	4
Fundamental	119457	Interpret and use information from texts	Level 3	NQF Level 03	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	NQF Level 03	5
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Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	NQF Level 03	5
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Elective	12035	Apply personal safety practices on a wastewater treatment works	Level 2	NQF Level 02	4
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Elective	114605	Carry out soldering and de-soldering procedures	Level 2	NQF Level 02	3
Elective	14928	Demonstrate knowledge of basic concepts of telecommunications	Level 2	NQF Level 02	7
Elective	337140	Adjust and maintain the production/assembly process	Level 3	NQF Level 03	7
Elective	9532	Demonstrate basic knowledge of computers	Level 3	NQF Level 03	6
Elective	244504	Describe and explain the principles of logistics support in a specific context	Level 3	NQF Level 03	6
Elective	115242	Draw and interpret electrical diagrams	Level 3	NQF Level 03	3
Elective	115245	Fabricate aircraft electrical looms and harnesses	Level 3	NQF Level 03	10
Elective	244321	Use elementary electronics as applied to electronic systems	Level 3	NQF Level 03	4
Elective	337139	Conduct sound measurement	Level 4	NQF Level 04	10
Elective	116329	Determine common electronic faults and conduct generic electronic tests	Level 4	NQF Level 04	3
Elective	119256	Inspect and test electrical circuits	Level 4	NQF Level 04	6

Figure 5 Solution 3 Unit Standards

1.5. RECOMMENDED SOLUTION

1.5.1. BRIEF DESCRIPTION OF SOLUTION

Our recommended solution is hybrid-built implementation of the alternative solutions but is wholly its own. We have drawn from the benefits from each solution while innovating other ideas to further improve the effectiveness of, and value added from, the solution.

- Unit standards
- Criteria table

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
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Elective	337140	Adjust and maintain the production/assembly process	Level 3	NQF Level 03	7
Elective	9532	Demonstrate basic knowledge of computers	Level 3	NQF Level 03	6
Elective	244504	Describe and explain the principles of logistics support in a specific context	Level 3	NQF Level 03	6
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Elective	115245	Fabricate aircraft electrical looms and harnesses	Level 3	NQF Level 03	10
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Elective	337139	Conduct sound measurement	Level 4	NQF Level 04	10
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Elective	119256	Inspect and test electrical circuits	Level 4	NQF Level 04	6

Figure 6 Recommended Solution Unit Standards

1.5.2. SOLUTION BREAKDOWN

- Stage 1

The first stage of getting the course accredited is submitting a Portfolio of Evidence prepared by the provider. This is required for MICT Seta to determine whether the provider has complied to all Functionality, Administration, Quality Management System, and Legislative requirements. Legislative requirements involve being registered as a legal entity and with SARS, maintaining financial statements, providing evidence of a health and safety certificate, as well as a lease agreement. Administration requirements focus on the ability to show that the business has a functional office, physical and postal address, telephone and fax facilities, and email and internet facilities. The Quality Management System is tailored around the provider's responsibility to present a business case, organogram outlining different job positions, policies that focus on staff recruitment, selection, appointment, performance management, and audit and staff development. The management of Education, Training, and Development Staff also need to be accounted for. This includes facilitators, assessors and moderator's CV's, qualifications, MICT Seta registration letters, and employment contracts outlining job descriptions. Lastly, Learner Management needs to be addressed. This involves learner recruitment and policies and

procedures for admission, cancellation, guidance and support, placement/replacement, assessment, moderation, and certification.

- Stage 2

At this stage, Whizz ICT is expected to provide the Phone Repairing Course program. The Program should comply with Unit Standards, be assessable, and result in qualifications. It will be evaluated by MICT Seta to ensure that the program's module is aligned with the unit standards and that it is up to date. Whizz ICT is required to submit a NQF designed Program structured as follows:

1. Program Outline.

- 1.1. Purpose of program

- 1.2. Targeted group

- 1.3. Duration/Notional Hours

2. Alignment/ Mapping against registered Qualification/Unit Standard

- 2.1. Qualification/Unit Standard Title

- 2.2. SAQA ID

- 2.3. NQF Level

- 2.4. Credits

- 2.5. Unpacking of every unit standard; its specific outcomes and assessment criteria

- 2.6. Material where they are covered.

- 2.6.1. Chapters, paragraphs and page numbers

- 2.7. How they are covered

- 2.7.1. Delivery strategy

- 2.7.2. Learning strategy

- 2.8. How they are assessed

- 2.8.1. Assessment methods

- 2.8.2. Frequency of assessment

- 2.8.3. Assessment tools

- 2.9. Required learning resources.

- 2.9.1. Learner Materials

- 2.9.2. Facilitator Material

- 2.9.3. Assessment Guide

The Program outline should describe the program that Whizz wishes to accredit. This program will be mapped against the registered Unit Standard required to obtain the Qualification. The mapping should allow the program to be assessed, to be strategically covered, to have enough resources in order to comply with the accreditation principles.

- Stage 3

This stage is about ensuring that there is an adequate learning environment with the required resources necessary to obtain the accreditation for the course. This includes having a lease agreement or proof of ownership for the property as well as having the required equipment and tools available to teach the course. The resources and equipment need to be adequate and the

computers used need to be functional. Lastly, the health compliance need to be met and safety measures need to be in place.

- Checklist

A Checklist that complies with the stage is provided in the guide. It can be used by Whizz ICT to make sure that at each stage, they have the documents required to get accreditation for the smartphone repair course. It can be used by the administrator to control the accreditation process and mitigate the risk of refusal.

- Projected Expenses

Expenses	Price
Staff training (2 courses @ R3550)	R 7100
Smartphone Repair Kits (4 kits @ R2000)	R 8 000
Printing of textbook (15 textbooks @ R20)	R 300
Total	R15 400

Staff training will be provided by Ledisa Academy. One staff member will be required to take the *Facilitator* training and another should take the *Moderator* training. These both comes at a cost of **R3550** per course.

Smartphone repair kits have been sourced online from CellTech Academy. These kits have been compiled to include all the necessary tools for cell phone repair. This includes:

- Hotair Station (Cost **R1300** per unit)
- Magnifying light (Cost **R250** per unit)
- Multimeter (Cost **R180** per unit)
- Toolkit (Cost **R80** per unit)
- Opening Tool (Cost **R80** per unit)
- Screen Remover (Cost **R180** per unit)
- Glue (Cost **R120** per unit)
- PCB Holder (Cost **R250** per unit)

The total cost of buying each component comes R2440. However, buying the kit comes at a cost of R2000 per kit, which gives Whizz ICT a saving of R440 per kit.

Textbook printing has been estimated at R0.38 per page. The current textbook has 50 pages meaning it costs approx... R20 to print each textbook.

- Possible Investors (external + internal: survey)

Naturally, our solution needs to provide a means to cater for these expenses. Investors have been categorized into external and internal.

Internal investors are the staff and students of the University of Cape Town. They can provide funding for the project through small donations from a fundraiser that will be held on campus.

External investors are companies who are able to provide funding for start-up and small businesses. Whizz ICT can able to the various financial schemes offered as a means of sourcing the required capital to supplement expenses. Our guideline provides a comprehensive list of possible external investors.

Since we have access to our internal investors, we were able to conduct a survey amongst them to establish the viability of using them as a supplementary source of funding. The results of the survey are shown below.

Have you ever donated to a community project before?

37 out of 37 people answered this question



Are you willing to support a project to help a community business in need?

36 out of 37 people answered this question



If a donation drive to help a community business in Khayelitsha was held at the University of Cape Town (Jammie Plaza), would you make a donation?

37 out of 37 people answered this question



Which are you more likely to donate:

37 out of 37 people answered this question



How much are you willing to donate?

37 out of 37 people answered this question



Figure 7 Survey Results

PART 2: PROJECT PLANNING AND IMPLEMENTATION

2.1. PROJECT OBJECTIVES

- Sustainability - the solution that will be implemented should be able to be kept in place for as long as it was designed to be sustained.
- Quality – the solution should be of the best quality, which contributes to the sustainability of the solution as mentioned above.
- Time – the solution should be implemented between 18 February 2019 and 3 May 2019, which is the duration of the project. This contributes to the prevention of scope creep.
- Budget – the solution to be implemented should stay under the specified budget.
- Upgrade brand – Whizz ICT’s brand should be upgraded to make their business more appealing to current and potential customers.
- Productivity – team members are to maintain productivity throughout the project to ensure the completion of it.
- Assist Whizz ICT in providing new and better services to customers and improve on the services already in place.
- Ensure a successful and smooth integration of the solution into Whizz ICT.
- Ensure that the solution complies with all the necessary rules, standards, and regulations.

2.3. WORK PLAN

2.3.1. PROJECT APPROACH

Firstly, we are going to initiate the project by meeting and collaborating with the different stake holders, both internal and external. Meeting with the stake holders will give us a better insight of the problem. With regards to the problem statement, we will discuss and solutions and create high level diagrams based on the chosen solution. We will draw up the project charter and get it signed-off by the relevant stake holders.

Next, we will move to the research stage where we will research the process needed to get the smart phone training course accredited. Research for creating handbooks, research on the resources needed and research on staff training requirements. Once all these have been completed, we will consolidate our findings.

The design stage will consist of designing the course outline, designing the handbook and designing the accreditation application phases from A to C.

A preliminary document will be created which will consist of the model of the accreditation application process flow. In the document we will consolidate the accreditation application phases. The policies will be defined, and the risk management planned.

Based on all our findings and research, we will have a Presentation that will consist of a poster and a slide show of which we will receive feedback for our final report.

Using everything we gathered thus far, including the feedback during the presentation, we plan to expand on our solutions and expand on our recommendations.

Finally, we will write a reflective statement as well as give feedback on the course and what we gained from this course.

2.5. PROTOTYPING AND TESTING

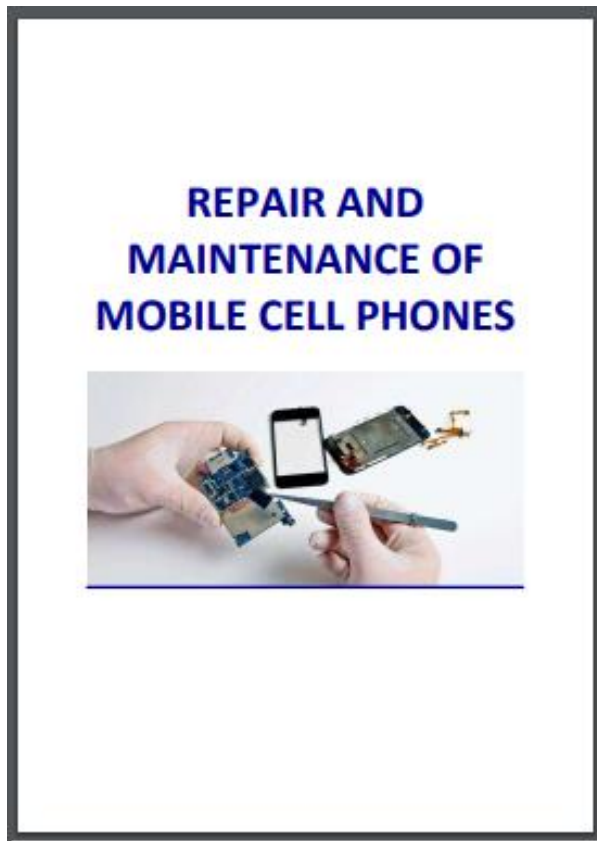


Figure 12 Course textbook cover

The image shows the 'Table of Contents' page from the textbook. At the top right, the title 'Mobile Phone Repair and Maintenance' is printed in a small font. The main title 'Table of Contents' is centered in a larger, bold, blue font. Below the title is a list of chapters and sections with their corresponding page numbers, separated by horizontal lines. The list includes: 'ABBREVIATIONS AND ACRONYMS' (4), 'MOBILE CELL PHONE REPAIR AND MAINTENANCE' (5), 'Introduction' (5), 'TOPIC 1: TYPES OF MOBILE PHONES' (6), 'What is a mobile phone?' (6), 'Types of Mobile Phones...' (6), 'What is a form factor?' (7), 'TOPIC 2: POTENTIAL HAZARDS ASSOCIATED WITH MOBILE PHONE REPAIR' (9), 'What is a hazard?' (9), 'TOPIC 3: PARTS OF A CONVENTIONAL MOBILE PHONE' (11), 'TOPIC 4: MOBILE PHONE REPAIR TOOLS' (13), 'Factors to Consider When Choosing Mobile Phone Repair tools' (13), 'Tools for Mobile Phone Repair' (13), 'TOPIC 5: DISASSEMBLING AND ASSEMBLING A MOBILE CELL PHONE' (19), 'What is to disassemble?' (19), 'What is to assemble?' (19), 'Disassembling A Mobile Phone' (20), 'Assembling a Mobile Phone' (22), 'TOPIC 6: DIAGNOSING AND REPAIRING MOBILE PHONE FAULTS' (23), 'Skills Needed to Diagnose and Repair a Mobile Phone' (23), 'Mobile Phone Diagnosis' (27), 'TOPIC 7: REPAIR OF COMMON MOBILE PHONE FAULTS' (30), 'What is a fault?' (30), 'Software Faults' (32), 'GLOSSARY' (45), 'REFERENCES' (46), and 'END OF COURSE SELF TEST' (57). At the bottom right corner, the text 'Page 3' is visible.

Figure 13 Textbook contents

To see the full textbook, click on the following link:

https://www.academia.edu/29219522/REPAIR_AND_MAINTENANCE_OF_MOBILE_CELL_PHONES_Mobile_Phone_Repair_and_Maintenance

2.6. OUTPUT AND EXHIBITS

A Comprehensive Guide to Accrediting Smartphone Repair Training Course Accreditation

Presented To
Whizz ICT



**In partial fulfilment of the
requirements for the
course**

**I.T Project Management
(INF3011F)**

11 April 2019



Bradley Malgas, Kenny Rakotoarison, Rifqah Francis, Victoria McDonald

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2.) INTRODUCTION

This guide aims to help assist Whizz ICT with putting together the documents and all other requirements for a fully-accredited smartphone repair training course. The accreditation will come from Media, Information and Communication Technologies Sector Education and Training Authority (MICT SETA). Students who take the course will leave with a National Certificate in Electronics (Qualification ID: 59569).

3.) PREREQUISITES

- Before the application can be made, the staff will be required to be trained. An accredited course requires both a course facilitator and course moderator. The business is also required to be registered with SARS. These elements are addressed in the guide but the guide is structured around the assumption that these will be obtained.
- Whizz ICT is in understanding of how to apply. Once

4.) STAGE 1

LEGISLATIVE REQUIREMENTS

- The company must be registered a legal entity – it recognized as having a legal standing in the eyes of the law and has legal rights and obligations.
- It must also be registered with and maintain a good standing with SARS (South African Revenue Service). The registration must be done within 60 days of starting the business by completing an IT77 form. Types of businesses include Sole Proprietorship, Partnerships, Private Companies, Close Corporations (CC), Small business corporation (SBC), Micro business, and Personal service giver.
- The company's financial statements must be examined and produce an audited financial statement.
- They must have a health and safety certificate that ensures that health and safety regulations are adhered to.
- They must have a bond registration document/lease agreement.

SHARED PRIMARY FOCUS

- MICT seta must be the ETQA (Education and Training Quality Assurance) of programmes offered by the provider
- The provider must not be accredited by another ETQA.

CONTACTABLE

- The provider must have a functional office to operate their business in
- They must have telephone and fax services for customers and other businesses to contact them if necessary.
- They must have email and internet facilities for employers and employees to make use of on a daily basis
- They must be able to provide a physical and postal address for customers and other businesses to reach them if necessary.

QMS (QUALITY MANAGEMENT SYSTEM)

The provider must have a working administration system.

- The administration system must account for a Business Plan that contains the business goals, the methods on how these goals can be attained, and the time frame within which these goals need to be achieved

- They must also have an Organogram which outline different job positions for the functionality of the organisation, and any indication of filled and vacant positions where applicable.

The provider must also have HR Policies and Procedures in place. These policies and procedures are responsible for

- Staff recruitment, selection and appointment
- Staff performance management – find techniques to manage and improve employee performance.
- Skills audit and staff development – identifying the skills gap in an organisation and performing a needs analysis that identifies where training is needed.

The provider must also be responsible for the Management of ETD (Electronic Theses and Dissertations) Staff. This includes

- Facilitators, assessors and moderators CV's, qualifications and employment contracts
- Outlining job descriptions so that each employee can know and understand exactly what they are meant to be doing.
- Assessors and moderators MICT seta resignation letters – if an assessors or moderator were to decide that they would like to resign, their letter of resignation must be submitted and be given an overview of.

Assessors and moderators with IT Unit Standards are required to be professionally registered with the MICT Seta. If not already registered, the required applications must be forwarded to MICT under separate cover. An assessor is a person who is registered or in the process of being registered with the MICT ETQA Division as subject matter expert and has the necessary assessment ETDP Seta credentials. A moderator is a person who is registered or in the process of being registered with the MICT ETA Division and has the necessary moderation ETDP Seta credentials.

The provider must also handle Learner Management. This includes

- Learner recruitment
- Admission policy and procedure – the process of admissions and how it will be dealt with.
- Cancellation policy and procedure – the process of cancellation and how this will be dealt with.
- Guidance and support policy and procedure – the process of providing guidance and support.

Assessment management must also be dealt with by the provider. This includes the

- RPL/Placement policy and procedure – what will be done in the case of placement and replacement.
- Assessment policy and procedure – the process of assessment and how it will be dealt with.
- Moderation policy and procedure – the process of moderation and how it will be dealt with.
- Certification policy and procedure – the process of certification and how it will be dealt with.

4.) STAGE 1 OUTPUTS (HR POLICIES, LEARNER MANAGEMENT, ASSESSMENT MANAGEMENT)

Staff recruitment, selection and appointment policy:

1. Objective of Recruitment Policy

The main objective of this recruitment policy is to ensure that the best candidate is hired following the correct process for hiring and selection. The between the hired candidate must adhere to the organisational values, philosophy and goals

2. Recruitment and selection policy and procedure

a. Preparation

- Create a thorough analysis of why the position is needed, as well as all the details of the job description.
- Determine the budget for the position.
- Make sure that the hiring process is based upon diversity so that uncommon skill sets can stand a chance.
- Make sure all new and current vacant positions are advertised properly.
- Formally review the roles of all vacant positions.
- Formally obtain all the necessary approvals.
- If there are any issues pertaining to a vacant position, approach HR formally.

3. Steps to be followed under HR Recruitment Policy

a. Job description for the vacancy - describe the main duties and responsibility of a role.

b. Job specification - describe the necessary skill set required, aptitude, knowledge required for the job profile and also experience for the job.

c. Advertising – the vacant position must be advertised both internally and externally. This can be done through the help of recruitment consultants.

d. Selection of candidate – this requires various stages:

- The recruiter, recruitment manager and the hiring manager forms a team for shortlisting of the desired profile.
- The selection and shortlisting team members must satisfy the eligibility criterion.
- Members of HR are involved in the selection and shortlisting phase only for recruitment of senior profiles.
- Major points must be noted for each shortlisted candidate.
- Details of the selection process is shared with the shortlisted candidate via email or telephone.
- If a candidate is based in some other city, all necessary arrangement must be made.
- The shortlisting of the candidate must be done purely on merit and it should be done only when there is the match of skill set and other desired qualities.

e. Selection and interview

- All shortlisted candidates are called in for an interview
- The Interview is carried out by a panel of members from different departments for managers and above positions. An interview committee is set up to conduct the interview.

- Different selection methods must be used before hiring a candidate, which must be able to assess the candidate rightly in terms of skills sets.
- The structure of the interview must remain the same for all candidates, but the interview questions may differ.
- The interview panel must take notes with important points of the interview.
- For senior level position, the interview panel should fill in and return the form given by the HR service team.
- Candidate feedback must be shared with the recruitment consultants.
- The candidates that were not selected must be informed via email or telephone.

f. Appointment of new candidate

- A verbal offer can be made to the candidate by the HR department.
- The offer must include the proposed salary.
- After the verbal offer has been made, the written offer is prepared by HR department considering the service standard.
- In the case of senior management positions, the offer is made by the HR Head and Director of the company while consulting with the CEO.

g. Induction

- Joining date must be confirmed
- HR must prepare the induction programme for the new candidate.

Admission policy:

1. Objective of Admission Policy

The main objective of this policy is to admit students from different cultures and with different levels of experience who can benefit from the course.

2. Application Process

- Application forms can be found online or collected at the Whizz ICT office.
- Application forms can be submitted online or handed in at the Whizz ICT office.
- The closing date for all applications will be specified on the application form.
- An initial check will be conducted by recruitment consultants once the application form has been submitted.

3. Offer of Admission

- An Offer of Admission will be sent to all successful applicants by e-mail (hard copies can be requested).
- The Offer of Admission includes:

§ The start and end dates of the course.

§ The fee and deadline for payment.

§ Any conditions of admission.

4. Rejection of Admission

Any candidates that have been rejected will be notified via email (a hard copy can be requested) that includes the reason(s) for rejection.

Cancellation Policy:

1. Applicants may cancel their application up until one month before the course has started.

· This must be done online or at the Whizz ICT office in writing.

· It cannot be done verbally

· A cancellation fee of R50 will be charged.

2. Whizz ICT can choose to cancel a course at any point

· This can only be done due to emergencies.

· All applicants/students and staff must be informed.

· Applicants/student must be given a refund based on how far the course has progressed.

Guidance and Support Policy:

1. Objective of Guidance and Support Policy

The main objective this policy is to make sure that all learners get the proper advice, guidance and support in order to complete the course.

2. Academic Learner Support

Students must be given guidance and support with

· Study skills

· Exam-writing skills

· Planning and organisational skills

· Building confidence

3. Foreign Students

Foreign students must be given additional material and assistance that aligns with their language in order to have the same opportunity as local students to complete the course.

Assessment Policy:

1. Objective of Assessment Policy

The main objective of this policy is to describe the principles, practices and regulations governing the assessment of students taking a course at Whizz ICT.

2. Assessment Requirements

- Active participation in all classes
- Attendance at all scheduled academic activities
- Submission of all work on deadline

3. Assessment Procedure

- All students must sign for the relevant assessment as proof of attendance.
- All students must complete the whole assessment.
- All students must ensure that the assessment is handed in on time.
- All students must check that the assessment has been marked correctly.

4. Feedback

- All students will be given feedback on their performance on a specific assessment once it has been marked.
- All students will be given feedback on their overall performance after they have completed the course.

Moderation Policy:

1. Objective of Moderation Policy

The main objective of this policy is to ensure that all certifications awarded to students are of the same standard and that the assessment procedure is fair, valid and reliable.

2. Moderators

- All moderators should have achieved a relevant moderation qualification (SAQA).
- The moderator will make a decision according to the examination of evidence provided.

3. Moderation Process

- Plan moderation
 - o Use of appropriate tools.
- Perform moderation
 - o Make sure assessment was fair, reliable and accurate.
 - o Make sure the appropriate documentation was used for assessment.
 - o Make sure assessment evidence is stored.
- Review moderation

Certification Policy:

1. Objective of Certification Policy

The main objective of this policy is to make sure that the course is aligned with to the Terms and Conditions of Accreditation as an Education Training Quality Assurance Body (ETQA).

2. The Certification Process and Procedure

- Ensure that the information of registered assessors and moderators is verified and captured.
- All learner achievements must be recognized.
- Perform quality assurance measures in the issuing of certificates.
- Perform security, fraud, prevention, authenticity and delegation measures and control in the issuing of certificates

5.) STAGE 2

1. PROGRAM OUTLINE.

1.1. PURPOSE OF PROGRAM: The Repair training course program provide learners with fundamental, basic knowledge and practical skills to be able to perform in the electronic fields. It provides them with opportunity to be recognized through prior learning.

1.2. TARGETED GROUP: The program is more valuable to learners who may have been practicing in the electrical fields and is therefore more adequate for electronic artisans or shop floor workers, but it can be taken by any learners seeking to perform in the electronic fields.

1.3. DURATION/NOTIONAL HOURS: The average duration of the program is 32 weeks.

2. ALIGNMENT/ MAPPING AGAINST REGISTERED QUALIFICATION/UNIT STANDARD

2.1. QUALIFICATION/UNIT STANDARD TITLE: The Qualification and/or Unit Standard that are sought to be accredited should be submitted in the application. The qualification which is the formal recognition of requirements at an NQF level is the National Certificate of Electronics. The Units standards which are the training outcomes after assessments are described in the Unit standards section.

2.2. SAQA ID: Each Qualification and Unit Standards are identified by a South African Qualifications Authority ID which is a unique proof that the qualifications are assessed by an authority and are implemented with respect to the National Qualifications Framework. The SAQA ID of the National Certificate of Electronics is 59569.

2.3. NQF LEVEL: The National Qualification Framework is a system to enhance integrity learning within the South African community and is used to classify the qualifications based on their level. The National Certificate of Electronic is NQF level 5, but if the required amount of credits is not met, the cluster of accredited unit standard is classified at NQF level 3.

2.4. CREDITS: A certain amount of Unit standards must be accredited in order to get the qualification. Each Unit standard is associated with a credit Amount. In order to get the certificate, 120 credits are required and is comprised of the core, the fundamental and the elective unit standards. However, it is not compulsory to fulfill the 120 credits and to only get accreditation for a cluster of unit standards.

2.5. UNPACKING OF EVERY UNIT STANDARD; ITS SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA: This section will be discussed in the Unit Standard Section.

2.6. MATERIAL WHERE THEY ARE COVERED.

2.6.1. Chapters, paragraphs and page numbers: The program's module should reflect on the chosen learning material. The chapters, paragraphs and page numbers must be submitted by Whizz ICT to be approved by MICT Seta as enhancing and supporting the Phone Repair program.

2.7. HOW THEY ARE COVERED

2.7.1. Delivery strategy: The delivery strategy aims to make sure that the outcomes with respect to the unit standard are met. The advised strategy is to use a combination of the lecture method to give a general understanding of the module and the case study method to put the learner in a real situation and apply the knowledge acquired during lectures.

2.7.2. Learning strategy: For the delivery strategy to be effective, a learning strategy should be used to enhance the learners and keep them involved. Whizz ICT can make use of a combination of auditory and visual learning during lectures and tactile learning during case studies.

2.8. HOW THEY ARE ASSESSED

2.8.1. Assessment methods

In order to be accredited, Whizz ICT needs to demonstrate that the methods used to assess the learner comply to the assessment principles. Assessments need to be summative and formative. Thus, methods on how the students will be evaluated at the end of a unit and how Whizz ICT will assist student to improve on learning strategy have to be provided. Those will be discussed in detail in the Course Outline section.

2.8.2. Frequency of assessment

The frequency at which learners will be assessed during the duration of the program. This will also be discussed in detail in the Course Outline section.

2.8.3. Assessment tools.

Whizz ICT should also demonstrate that they have the tools to conduct the assessments and supports the assessors. Assessment policies and assessment guide must be submitted with the application.

2.9. REQUIRED LEARNING RESOURCES.

2.9.1. Learner Materials: The learner should have access to any facility if the needs arise. The learner support should be relevant at all time. Whizz ICT can provide the learners with copy of the learning material described in the Resources section by using the printing service

2.9.2. Facilitator Material: Facilitator should make use of approved learning programs to make sure that the delivery strategy is enhanced and that the skills are transmitted to the learners. The facilitator material will be also described in the Resources section.

2.9.3. Assessment Guide: Assessment should be focused on the learner's ability to apply their practical knowledge in a phone repairing context. Assessors will use this guide to make sure that the learners are assessed based on the unit standards outcomes. They should be able to perform in a real-life situation and show evidence of their capability to repair a phone

PROGRAMME OUTLINE

Course Outline for



Smartphone Repair Training 2019

TIMES & VENUES

Class Times: Monday to Friday (8am - 10am, 10am - 12pm, 12pm - 2pm, 2pm - 4pm, 4pm - 6pm)

Class Times: Saturday and Sunday (8am - 1pm)

INSTRUCTORS

Thembinkosi Qondela (**Course moderator**)

Email: tqondela@gmail.com

Office Hours: By appointment

OG (**Course assessor**)

Tel: 061 102 0050

Office Hours: By appointment

OVERVIEW

Smartphone Repair Training is a course for those who wish not only to gain an understanding of smartphone components, but also put this to practice and apply it to find a job. This course thus combines the theoretical elements of smartphone repair with the practical implementation of these concepts through completing various practicals.

The theoretical part of this course introduces students to concepts related to electronics and technical aspects of cellphones. It also equip students with crucial problem-solving skills, and partially computer literacy. The practical component of this course involves application and implementation of these concepts, using them to repair smartphones using the various equipment.

The course is structured around two main areas:

Cellphone Repair – This deals with the physical components and how to go about dealing with the installation and replacement of hardware.

Smartphone Maintenance – This deals with software issues and how to manage a smartphone device.

LEARNING OUTCOMES

Upon completion of this course you should be able to

Identify different types of mobile cell phones

Recognize potential hazards in the repair of mobile cell phones

Identify the parts of a mobile cell phone

Use the correct hardware tools to repair mobile cell phones

Assemble and disassemble mobile cell phones

Identify mobile cell phone faults and solve them

TEXTBOOK

Repair and Maintenance of Mobile Cell Phones, Joan Mutero & Anthony Okuku

The textbook that will be used throughout this course has been developed under the Creative Commons licence and is therefore available for free on the internet. You will be provided with a physical copy but should you wish, you can find the textbook here: http://oasis.col.org/bitstream/handle/11599/1754/2015_Douglas_Repair-Maintenance-Mobile-Cell-Phones.pdf?sequence=5&isAllowed=y.

COURSE MATERIALS

Course Outline

Lecture Schedule

Lecture notes & specific readings from textbook

Practical guidelines

COURSE STRUCTURE

The smartphone repair training course is a 6-month course with one **2-hour lesson** every weekday and for those who cannot make those, one **5-hour lesson** on Saturday and Sunday. A lecture schedule is provided as a separate document and will be given to students as soon as it is finalized. Please note changes can be made to this and students will be notified accordingly

ASSESSMENT

Below is a breakdown of the various course activities and/or deliverables. *(The weight of different deliverables can be adjusted during the semester at the discretion of the course assessor)*

Activity/Deliverable	Percentage
Class Attendance	5
Practicals	15
Assignments	10
Test	20

Year Mark	50
Exam	50
Total	100

The exam sub-minimum of 50% pertains to all students.

GENERAL COURSE MANAGEMENT

For all **administrative enquires** (incl. class register, medical certificates etc.) contact the **course administrator**.

MISSING CLASSES/PRACTICALS

If you miss a **class**, it is your responsibility to find out what was covered during the lesson. You can get the relevant notes from the relevant facilitator.

If you miss a **practical** you need to provide the course administrator with a medical certificate or other documentation when you are better. If your absence is due to circumstances beyond your control (on the basis of the documentation provided) you will be excused from the **practical** or given an extension.

GETTING HELP

Feel free to discuss your work with your course moderator, course assessor or any of the facilitators. It is always better to discuss your approach beforehand, as the course deals with handling of sensitive equipment and components.

UNIT STANDARDS

UNIT STANDARDS – CORE:

- Demonstrate knowledge of electrical and electronic components (115230) – the student must be able to show that they understand the basics of electrical and electronic components within a mobile phone upon disassembling and assembling.
- Demonstrate knowledge of electrical safe working practices (115234) – the student must be able to show that they understand the safety procedures when dealing with electrical components.
- Understand fundamentals of electricity (113877) - the student must be able to show that they understand the fundamentals of electricity as a core element of working with the tools and equipment needed for repairing a phone.
- Use and maintain hand tools and equipment (7427) - the student must be able to show that they understand how to use the proper hand tools and equipment when disassembling and assembling a mobile phone.
- Construct basic electronic circuits (10270) - the student must be able to show that they understand how to build basic electric circuits in order to work with various components of the mobile phone.
- Demonstrate an understanding of basic digital circuits (253074) - the student must be able to show that they understand basic digital circuits since as a fundamental component of repairing a mobile phone.

- Perform basic electrical circuit calculations (253054) - the student must be able to show that they understand how to perform basic electrical circuit calculations in order to demonstrate their knowledge of practical work.
- Perform electronic fault-finding (253094) - the student must be able to show that they understand how to perform the diagnosis and repairing of mobile phone faults.
- Test and replace basic electronic components (253334) - the student must be able to show that they understand how to test and replace basic electronic components upon disassembling and assembling of mobile phones.
- Understand basic electronic theory and components (114406) - the student must be able to show that they understand the basic theory that their practical work is based upon.

Unit Standards: Fundamental

Accommodate audience and context needs in oral/signed communication

Level: 3

ID: [119472](#)

This unit standard aims to make the learners aware of their communication level and adapt it to the customer's level. It will provide them with the capacity of capturing the customer's interest. It promotes effective teamwork and customer-provider relationship.

Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations

Level: 3

ID: [9010](#)

This unit standards provide the learners with the ability to convert different measurement units in order to demonstrate the effect of error in calculations. This is essential as it helps them to be more involved in the electronics fields.

Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts

Level: 3

ID: [9013](#)

This unit standards provide the learners with the ability to solve, interpret and establish geometrical relationships in 2 and 3 dimensional space problems with respect to the electrical context. It will help them to solve mathematical and physical calculations in order to repair some aspects of a cellphone.

Interpret and use information from texts

Level: 3

ID:[119457](#)

This unit standards provide the learners with the ability to read and extract implicit and explicit information from text, interpret them and draw conjectures from them to solve an electrical problem.

Investigate life and work related problems using data and probabilities

Level: 3

ID:[9012](#)

This will give them the ability to relate with problems often encountered at the workplace, and deduce a pattern in order to solve that problem more quickly. This is an essential skill in order to investigate data and deduce a predictive model to become a better worker.

Use language and communication in occupational learning programmes

Level: 3

ID:[119467](#)

This is an essential skill for every learner. They should be able to access and make proper use of the learner materials, to be able to solve and conduct basic research, to work in teams. The aim is to provide the learners with as much as support as possible while also giving them the ability to work on their own.

Use mathematics to investigate and monitor the financial aspects of personal, business and national issues

Level: 3

ID:[7456](#)

This unit standard aims to provide the learners the ability to keep tracks of their financial transactions. This provides them with financial investment knowledge.

Write/present/sign texts for a range of communicative contexts

Level: 3

ID:[119465](#)

This unit standards aim to give the learner to ability to write/sign for a specified audience. It makes use of languages structures to produce a concise and comprehensive text for different contexts.

Unit Standards -Electives

- Applying Soldering Techniques ([113863](#)) – Learn the basics of soldering. Identify tools needed for soldering as well as ensure safety measure is in place before soldering.
- Carry out soldering and de-soldering ([114605](#)) – Learn how to safely identify, select, inspect and carry out soldering/de-soldering operations. Demonstrate knowledge of different soldering techniques. Clean and store soldering material and learn to properly dispose of waste material.
- Demonstrate basic Knowledge of computers ([9532](#)) – Students need to know the basics of a computer in order to use the computer to do phone repair calculations and research. Basic knowledge of using Microsoft software.
- Draw and interpret electrical diagrams ([9532](#)) – Student needs to demonstrate knowledge of electrical symbols and terminology. The student will learn to draw, design and explain control and lighting circuits. Students will learn to prepare drawings for electrical installation.
- Use elementary electronics as applied to electronic systems ([244321](#)) – Student will learn to apply elementary electrical fundamentals, demonstrate the application of electronic components used in electrical installations. The student will learn to use multimeters to perform measurements in electronic circuits.
- Determine common electronic faults and conduct generic electronic tests ([116329](#)) – Students will learn to identify system malfunctions. Observation of machinery includes visual, hearing, smelling and touching. Fault finding data includes data direct observation and measurement.

Inspect and test electrical circuits ([119256](#)) – Students will learn to; read and interpret electrical circuit diagrams, prepare the work area, inspect electrical circuits, test electrical circuits and complete work activities.

7.) STAGE 3

This stage is about ensuring that there is an adequate learning environment with the required resources necessary to obtain the accreditation for the course.

There are specific structural requirements that need to be met:

- Proof of ownership of the property or a lease agreement of the learning facilities needs to be up to date and accurate.
- A floor plan of the facilities needs to be provided, showing the layout of the class rooms, office and restroom.
- An Inventory list is required of all the equipment, tools and furniture that is needed for teaching the smart phone repair course.
- Equipment and resources need to be adequate and appropriate in such that the computers are functional, computers are connected to a network, the relevant software to the programs are installed and the email as well as the internet have connectivity.
- With regards to customer care, there is a waiting room for customers, a clear reception area as well as tearoom or water available for the customers.
- The health compliance needs to be adequate. Bathrooms/ toilets need to be clean and functional.
- Safety measures need to be in place. First aid kit needs to be available; fire extinguishers need to be available and easily accessible in case of emergencies. All cables need to be neatly placed to avoid injuries or accidents. There needs to be emergency exits that are clearly labelled.

The above requirements need to be met and failure to do so will result in application being postponed to a later date.

The application must be completed, signed and returned by hand or courier

8.) CHECKLIST

Phases	Sub-phases	Requirements To be Completed	✓
Stage 1: Portfolio of Evidence (PoE)	<i>Legislative requirement</i>	<ul style="list-style-type: none"> Registration as a legal entity 	
		<ul style="list-style-type: none"> Registration with SARS (PAYE, SDL, VAT, UIF) 	
		<ul style="list-style-type: none"> Good standing with SARS. 	
		<ul style="list-style-type: none"> Audited financial statement. 	
		<ul style="list-style-type: none"> Health and safety certificate. 	
		<ul style="list-style-type: none"> Bond registration document/lease agreement. 	
		<i>Shared Primary Focus</i>	<ul style="list-style-type: none"> MICT seta is the ETQA of programmes offered by the provider.
		<ul style="list-style-type: none"> Provider is not accredited by another ETQA. 	
	<i>Contactable</i>	<ul style="list-style-type: none"> Provider has functional office. 	
		<ul style="list-style-type: none"> Provider can provide physical and postal address. 	
		<ul style="list-style-type: none"> Provider has telephone and fax facilities. 	
		<ul style="list-style-type: none"> Provider has email and internet facilities. 	
	<i>QMS</i>	<ul style="list-style-type: none"> Provider has Business plan. 	
		<ul style="list-style-type: none"> Provider has Organogram which outlines different job positions for the functionality of the organization, indication of filled and vacant position where applicable. 	
		<ul style="list-style-type: none"> HR Policies and Procedures 	
		<ul style="list-style-type: none"> Staff recruitment, selection and appointment policies and procedures. 	

		<ul style="list-style-type: none"> • Staff Performance Management 	
		<ul style="list-style-type: none"> • Skills Audit and Staff Development Procedure. 	
		<ul style="list-style-type: none"> • Facilitators, Assessors and Moderators CV's, 	
		<ul style="list-style-type: none"> • Facilitators, Assessors and Moderators Qualifications 	
		<ul style="list-style-type: none"> • Assessors and Moderators MICT seta registration letters. 	
		<ul style="list-style-type: none"> • Facilitators, Assessors and Moderators employment contracts outlining job descriptions. 	
		<ul style="list-style-type: none"> • Learner Recruitment 	
		<ul style="list-style-type: none"> • Admission policy and procedure. 	
		<ul style="list-style-type: none"> • Cancellation policy and procedure. 	
		<ul style="list-style-type: none"> • Guidance and support Policy and Procedure. 	
		<ul style="list-style-type: none"> • RPL/Placement policy and procedure 	
		<ul style="list-style-type: none"> • Assessment policy and procedure. 	
		<ul style="list-style-type: none"> • Moderation policy and procedure. 	
		<ul style="list-style-type: none"> • Certification policy and procedure. 	

Phase	Sub-phases	Requirements To be Completed	
Stage 2 Curriculum Aligned with Unit Standards	Programme Outline	<ul style="list-style-type: none"> • Purpose of programme. 	
		<ul style="list-style-type: none"> • Targeted group 	
		<ul style="list-style-type: none"> • Duration/Notional Hours 	

	<i>Alignment against registered Qualification/ Unit Standard</i>	<ul style="list-style-type: none"> • Qualification/Unit Standard Title 	
		<ul style="list-style-type: none"> • SAQA ID 	
		<ul style="list-style-type: none"> • NQF Level 	
		<ul style="list-style-type: none"> • Credits 	
		<ul style="list-style-type: none"> • Unpacking of every unit standard; its specific outcomes and assessment criteria 	
		<ul style="list-style-type: none"> • Material where they are covered 	
		<ul style="list-style-type: none"> • Chapters, paragraphs and page numbers 	
		<ul style="list-style-type: none"> • Delivery strategy 	
		<ul style="list-style-type: none"> • Learning strategy 	
		<ul style="list-style-type: none"> • Assessment methods 	
		<ul style="list-style-type: none"> • Frequency of assessment 	
		<ul style="list-style-type: none"> • Assessment tools 	
		<ul style="list-style-type: none"> • Learner Materials. 	
		<ul style="list-style-type: none"> • Facilitator Material. 	
		<ul style="list-style-type: none"> • Assessment Guide 	

Phase	Sub-phases	Requirements To be Completed	
Stage 3: Learning Site Compliance		<ul style="list-style-type: none"> • Proof of Ownership or Lease Agreement of learning facilities 	

		<ul style="list-style-type: none"> • Floor Plan of the learning facilities 	
		<ul style="list-style-type: none"> • Inventory list of Training equipment and furniture 	
		<ul style="list-style-type: none"> • Adequacy and appropriateness of equipment/resources. 	
		<ul style="list-style-type: none"> • Functional computers 	
		<ul style="list-style-type: none"> • Networked Computers 	
		<ul style="list-style-type: none"> • Software relevant to programme offered. 	
		<ul style="list-style-type: none"> • Internet & E-mail connectivity. 	
		<ul style="list-style-type: none"> • Waiting rooms 	
		<ul style="list-style-type: none"> • Clear reception area 	
		<ul style="list-style-type: none"> • Tearooms 	
		<ul style="list-style-type: none"> • Adequate bathrooms/toilets 	
		<ul style="list-style-type: none"> • Cleanliness 	
		<ul style="list-style-type: none"> • First Aid Kit 	
		<ul style="list-style-type: none"> • Adequate fire extinguishers 	
		<ul style="list-style-type: none"> • Cables neatly placed. 	
		<ul style="list-style-type: none"> • Emergency exits. 	

9.) POSSIBLE INVESTORS

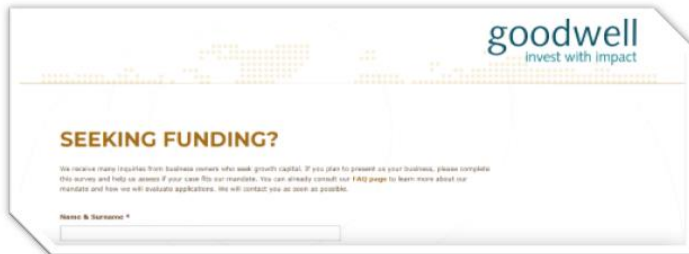
GOODWELL INVESTMENTS

ABOUT:

Goodwell Investments is an Amsterdam based investment fund takes a hands-on approach to funding startups. It offers microfinance and startup funding for African SMME's. It also offers entrepreneur's assistance strategy, planning,

fundraising, governance and reporting. Goodwell Investments is a pioneering investment firm focused on financial inclusion, fintech and inclusive growth in sectors providing basic goods and services and income generation opportunities to the underserved.

Website: <https://www.goodwell.nl/>



This is a page on the website navigated from the home page under “seeking funding”, where businesses can apply for funding

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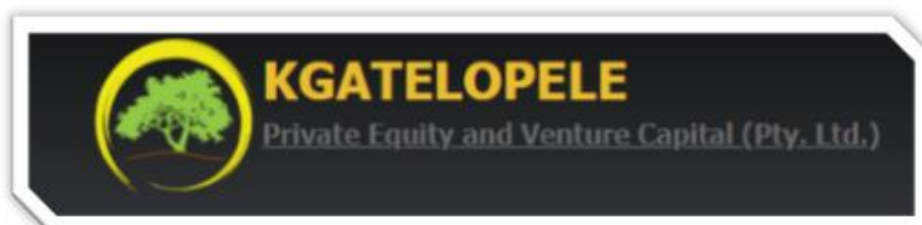
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KGATELOPELE

ABOUT

Kgatelopele is a South African private equity firm that funds under-developed Black owned businesses that show growth potential. They assist with raising capital, help source talent and develop growth strategies for their clients with the aim of raising value. Kgatelopele will form partnerships with SMMEs, without the owners relinquishing control of their businesses. Kgatelopele will be actively involved in the management and operations of the business, and where a specialised skill is required, the company will outsource and manage

Website: <http://www.kgatelopele.co.za/index.html>



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KNIFE CAPITAL

ABOUT

Knife Capital is Cape-based venture capital firm. Their target is post-revenue stage companies that require funding for growth or expansion, with a strong product or service offering and a scalable business model. They recently invested in SkillUp, a Cape Town-based that offers parents and students across South Africa access to thousands of highly skilled and vetted tutors based on grades, subject, location, and budget. Machine learning company, DataProphet, also secured funding from the firm earlier this year.

Website: <https://www.knifecap.com/>



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