

Curriculum for Khanya Woodworking and Carpentry skills training course

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1. Introduction

This curriculum has been drafted as part of the Grant Agreement between Khanya (“the donor”) and The Grahamstown Project (“the NGO”) to run an 8-month “building skills for life” pilot, to train 3 candidates in work skills, in a carpentry and woodworking context. Section 2 of the agreement lays out the general objectives of the project. These are to:

- Identify, recruit, formally contract with and train 3 candidates (“the trainees”)
- Develop and document a curriculum
- Provide trainees with 5 days per week on the job training, to include 4hrs per week woodwork theory training, for 8 months.

The training objectives of the project are that by the end of the eight-month period the trainees will have:

- Developed and gained an understanding of a professional approach to working (in areas such as time-keeping, reliability, communication with clients, estimating and agreeing requirements of a job).
- Developed an understanding of the theory of woodworking, including (but not restricted to) basic drawing, ruler measure work and use of hand tools.
- Developed an understanding and been involved in the preparation, assisting and finishing work (including moving timber and materials, cutting, various ways of manual/machine sanding and filing).
- Developed an understanding and been involved in carrying out the basic tasks for the process of supplying a finished product to a client; and
- Been able to work on their own projects in order to have demonstrable examples of their work.

As is clear from the above objectives, the training incorporates:

- Theoretical and practical woodworking / carpentry skills.
- Skills and behaviours appropriate to working in a business.
- Life-skills.

This curriculum deals (mostly) with the theoretical and practical woodworking / carpentry skills.

2. Timescale

As noted above the skills training course is for a period of 8 months. The course commenced on 1 November 2019 and ends 30 June 2020. It provides trainees with 5 days per week on the job training and includes 4hrs per week woodwork theory training. It is anticipated that the pilot will develop into an ongoing skills training project.

3. Aim

At the end of the course trainees will have acquired woodworking and carpentry skills that will equip them to work in a woodworking / carpentry business and / or in the building trade. The trainees will have developed an understanding and have practical experience of:

- The theory of woodworking.
- Being involved in the planning, design, preparation, assisting and finishing work.
- Carrying out the basic tasks for the process of supplying a finished product to a client.

The trainees should demonstrate their understanding and practical experience by being able to achieve the following outcomes:

- Hanging doors.
- Repairing broken doors, windows, furniture etc.
- Assisting with:
 - o installing skirting.
 - o Installing decking.
 - o Erecting roof trusses.
- Producing own work (e.g. table / chair / bench etc) by applying skills learned through the planning, design, preparation and finishing process.

Importantly, in achieving these demonstrable outcomes the trainees should also have developed and gained an understanding of a professional approach to work in areas such as time-keeping, reliability, communication with clients, estimating and agreeing requirements of a job, and working with allied trades such as bricklayers.

4. Objectives

Trainees will be trained and have practical experience of the following:

- Workshop orientation.
- General workshop / site safety.
- Workshop terminology and correct names (and Xhosa words) for tools etc.
- Moving and stacking / storing timber and materials.
- Sanding.
- Hand saw work.
- Use of drawing board.
- Tape measure work.

- Ruler measure work.
- Principles of angles.
- Use of hand tools (hammer, chisels, screwdrivers etc.)
- Cleaning and maintenance of tools.
- Bench work and use of vices.
- Mortise & Tenon joints.
- Basic carving (making spoons, bowls etc)
- Applying stains to prepared timber.
- Sealing with paint products and flattening of sealers.
- Hanging and fitting doors.
- Reading basic plans / drawings.
- Working out quantities of materials required.
- Machine work assistance (table saw, spindle etc).
- Quality assessment and control.

5. Learning Modules

As this is a pilot project, the design of the various modules incorporating the learning objectives above is a work-in-progress. The learning process (classroom and on-the-job in the workshop / on site) is by nature also iterative so the trainees are continuously building on skills previously taught as they grow in their understanding and practical application of the skills learned.

- Module one:

Introduction to the workshop, wood in its various forms, woodworking tools, workshop terminology, and workshop safety.

- Module two:

Introduction to planning, design and preparation to complete a woodworking task / project in the best possible manner.

Correct techniques and use of various sand papers (fine grit etc) to achieve desired outcomes. Understanding of grain direction, use of block to sand flat, and different hand pressures.

Introduction to various hand-saws and cutting. Use of the drawing board to draw the woodwork joint to be cut. Cutting straight and the use of a square for drawing a pencil line around the block of timber. Use of various different saws, principles of angles, and use of work bench and vices to cut wood and produce crosscuts. Correct techniques for cutting wood of different types (hard / soft) and thickness. Correct use of various other hand tool and the cleaning and maintenance of tools.

- Module 3

Building on skills learned (drawing board using measurements, bench work, use of vices etc) to make Mortise & Tenon joints and produce own work such as tables and benches. Introduction to various chisels to produce basic carvings (spoons, bowls etc). Applying stains to prepared timber, sealing with paint products and flattening of sealers.

- Module 4

Hanging and fitting doors using locks and hinges. Reading basic plans / drawings and working out quantities of materials required to complete projects. Assisting on woodworking and carpentry projects as they arise (skirting, decking, roof trusses etc) and machine work assistance. Quality assessment and control.

On completion of the course, students should be able to take a simple woodworking project from plan to completion, calculate quantities of materials, work safely, and produce a professional end product that meets the requirements of the client.