ALIGNMENT MATRIX

SAQA ID 9013

SAQA ID 9013	*Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts*	NQF ***3***	Credits ***4***

National Certificate

National Certificate: Building and Civil Constructions

SAQA ID: 65409 **NQF 3** **CREDITS 140**

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Alignment Matrix

Module No:		**NQF Level :**	**Total Notional Hours:** **Contact Time Workplace:** **Classroom:** **Assessments:**	**Credits:**
SAQA ID	**Unit Standard Title**		**Program Outcomes Module No:**	**Legend Indicators**
9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts		Measure, estimate, and calculate physical quantities in practical situations relevant to the adult in life or the workplace Explore describe and represent, interpret and justify geometrical relationships and conjectures to solve problems in two and three dimensional geometrical situations	O – Observation Q – Questioning S – Simulation CS – Case Study T – Testimonial WA – Workplace Assignment
Document Purpose			**Range**	
This unit standard is designed to provide credits towards the mathematical literacy requirements of the NQF at level 3. The essential purposes of the mathematical literacy requirements are that, as the learner progresses with confidence through the levels, the learner will grow in: An insightful use of mathematics in the management of the needs of everyday living to become a self-managing person An understanding of mathematical applications that provides insight into the learner`s present and future occupational experiences and so develop into a contributing worker The ability to voice a critical sensitivity to the role of mathematics in a democratic society and so become a participating citizen. People credited with this unit standard are able to:			The scope of this unit standard includes length, surface area, volume, mass, speed ; ratio and proportion; making and justifying conjectures. Contexts relevant to the adult, the workplace and the local community. More detailed range statements are provided for specific outcomes and assessment criteria as needed.	

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Critical Cross field Outcomes CCFO's	**Learning Outcomes**
UNIT STANDARD CCFO IDENTIFYING Identify and solve problems using critical and creative thinking: Solve a variety of problems involving space, shape and time using geometrical techniques related to the life or workplace of the learner UNIT STANDARD CCFO ORGANISING Collect, analyse, organise and critically evaluate information: Gather, organise, and interpret information about objects and processes. UNIT STANDARD CCFO COMMUNICATING Communicate effectively: Use everyday language and mathematical language to describe properties, processes and problem solving methods. UNIT STANDARD CCFO SCIENCE	Measure, estimate, and calculate physical quantities in practical situations relevant to the adult in life or the workplace Explore describe and represent, interpret and justify geometrical relationships and conjectures to solve problems in two and three dimensional geometrical situations

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Use mathematics: Use mathematics to analyse, describe and represent realistic and abstract situations and to solve problems relevant to the adult, the workplace and the local community.	

Unit Standard Information		Material Alignment			Media Aids	Assessment
Specific Outcomes	**Assessment Criteria**	**Facilitator Plan**	**Learner Manual**	**Learner Workbook**	**Equipment / Aids**	**Strategy (Legend)**
Measure, estimate, and calculate physical quantities in practical situations	ASSESSMENT CRITERION 1 1. Scales on the measuring instruments are read correctly.	Page 8	Page 11	Question 1		Formative Assessment Summative Assessment – Practical
	ASSESSMENT CRITERION 2 2. Quantities are estimated to a tolerance justified in the context of the need.	Page 17	Page 15	Question 2		Formative Assessment Summative Assessment – Practical
	ASSESSMENT CRITERION 3 3. The appropriate instrument is chosen to measure a particular quantity.	Page 18	Page 15	Question 3		Formative Assessment Summative Assessment - Practical

	ASSESSMENT CRITERION 4 4. Quantities are measured correctly to within the least step of the instrument. ASSESSMENT CRITERION 5 5. Calculations are carried out correctly. ASSESSMENT CRITERION 6 6. Symbols and units are used in accordance with SI conventions and as appropriate to the situation	Page 20 Page 20 Page 20				
Explore, describe and represent, interpret and justify geometrical relationships and conjectures	ASSESSMENT CRITERION 1 1. Descriptions are based on a systematic analysis of the shapes and reflect the properties of the	Page 40	Page 17 Page 25	Question 4 Question 5		Formative Assessment Summative Assessment – Practical

	shapes accurately, clearly and completely. ASSESSMENT CRITERION 2 2. Descriptions include quantitative information appropriate to the situation and need. ASSESSMENT CRITERION 3 3. Conjectures as appropriate to the situation, are based on well-planned investigations of geometrical properties. ASSESSMENT CRITERION 4 4. Representations of the problems are consistent with and appropriate to the problem context. The problems are	Page 41 Page 41 Page 41				Formative Assessment Summative Assessment - Practical

	represented comprehensively and in mathematical terms. ASSESSMENT CRITERION 5 5. Results are achieved through efficient and correct analysis and manipulation of representations. ASSESSMENT CRITERION 6 6. Problem-solving methods are presented clearly, logically and in mathematical terms. ASSESSMENT CRITERION 7 7. Solutions are correct and are interpreted and validated in terms of the context of the problem.	Page 51-69 Page 51-69 Page 51-69				