

**DEMONSTRATE AN UNDERSTANDING OF THE USE OF DIFFERENT
NUMBER BASES AND MEASUREMENT UNITS AND AN AWARENESS OF
ERROR IN THE CONTEXT OF RELEVANT CALCULATIONS**

SAQA ID: 9010

NQF LEVEL: 03

CREDITS: 02

OUTLINE

MODULE 1 - Convert numbers between the decimal number system and the binary number system.

- Perform addition and subtraction of positive whole numbers in binary up to 100002 (16 in decimal).
- Demonstrate understanding of the mathematical relationships and principles involved in the computations.
- Conversion between binary and decimal numbers is done correctly.
- Basic addition and subtraction calculations in the binary number system are done correctly.
- Using positive whole numbers up to the 16 in decimal.
- Practical applications of the decimal and binary system are explained correctly.

MODULE 2 - Work with numbers in different ways to express size and magnitude.

- Use scientific notation for small and large numbers.
- The prefixes indicating magnitude in measurements are correctly related to the decimal system.
- From Giga to Pico (10^{12} to 10^{-12})
- Conversions between related units in different measurement systems are correctly applied in real-life contexts. SI to Imperial; Degrees F to degrees C.

Specific Outcome 3: Demonstrate the effect of error in calculations.

- Work with rational and irrational numbers.
- Explore repeating decimals and convert them to common fraction form
- Use scientific notation for small and large numbers.
- Symbols for irrational numbers such as π and e are left in formulae or steps to calculations except where approximations are required.
- Descriptions are provided of the effect of rounding prematurely in calculations.
- The desired degree of accuracy is determined in relation to the practical context.
- The final value of a calculation is expressed in terms of the required unit.

DURATION:

Theoretical training: 3 days

RATIO:

Theoretical training:
15 learners per Facilitator/Assessor

For more information on this workshop or to reserve your spot, please contact:

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