

LAND SURVEYOR

MODULE 1

LSM/OS/LM/CR/02/5/MA

CONDUCT TOPOGRAPHICAL SURVEY

MAY-JULY 2025



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICAL ASSESSMENT

INSTRUCTIONS TO THE CANDIDATE:

1. This unit of competence shall be assessed in two phases.
2. Each assessment session has the duration included in brackets.
3. The assessor will take photos and videos as you perform the tasks at critical points during the assessment.
4. Ensure all required resources for the assessment have been provided before beginning the assessment.

1. PRACTICAL SESSION (6 HOURS)

Elements Covered

1. Conduct topographical survey reconnaissance;
2. Establish topographical survey control points;
3. Collect topographical features data;
4. .Prepare topographical map.

Tasks

You are required to perform the following tasks;

- i. Select a suitable site with linear, point and polygon features
- ii. Physically mark two points A and B spaced 30 meters apart on the ground, ensuring unobstructed sightlines between them.
- iii. Measure and record the geographic coordinates of the marked points A and B by use of a handheld GPS receiver;
- iv. Compute the bearing and distance between the two control points A and B from the recorded coordinates;
- v. Set up the total station at point A and orient it to B;
- vi. Using the total station, observe and record topographical details for at least 20 spatially distributed points within the site forming point, linear and polygon features;
- vii. Enter the details obtained in task (vi) into an excel worksheet and import them into ArcGIS/AutoCAD software;
- viii. Visualize the detail points on the software and digitize them to form linear, point and polygon features as they appeared on the ground;
- ix. Prepare and print out a topographical map of the site in an A4 size paper.