ARUSHA TECHNICAL COLLEGE
TRANSPORTATION ENGINEERING DEPARTMENT

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LAND SURVEY AND GEOMATICS

1.0. DURATION: 1 Week.

2.0. COURSE OBJECTIVES

The mainobjective of thisshortcourse istotrainArtisans,Technicians,Agriculturalistand Engineerssoastoenhancetheirknowledgeandskillsin landsurveyinginordertocopewith relevant technologyinconstruction industry.

3.0. SPECIFIC OBJECTIVES

THEORY

a. Basic concepts of surveying.
b. Principle of levelling
c. Types of measurements in surveying
d. Levelling applications
e. Errors and calibration
f. Instruments specifications
g. Field procedures and setting of instruments
h. Traversing
i. Contouring
j. Setting out of curves
k. Bearingand coordinating

PRACTICAL

a. Levellingsurvey
b. Obstacles/obstruction tomeasuring
c. Cut and fill in civil androad works
d. Determination of anarea,distance and settingout of angles
e. Traversing
f. Contouring
g. Settingout of curves.

4.0. TARGET GROUP

Artisans,Technicians,Agriculturalistand Engineersin the following field, Civil Engineering, Transportation/highwayEngineering, Irrigation Engineering, Water resources Engineering, Agriculture, Civil and irrigation Engineeringsoastoenhancetheirknowledgeandskills

5.0 COURSE OUTCOME

Upon compilation participant(s) shouldbe able tounderstandthe fundamentaluse of surveytools, instrumentsandcarryoutasimple survey works.

6.0 COURSE FEE

The course fee is Four Hundred Thousand Tanzania shillings (400,000/=) inclusive of practical materials.

LAND SURVEYING&GEOMATICS COURSE

TIME TABLE/SCHEDULE.

TIME	TOPICS/ACTIVITY	RESPONSIBLE
DAY 1		
08:00-09:00	• Arrivals&Registration	Participants
TEA BREAK		
09:00-11:30	**1. THEORY** • Basicconcepts of surveying. • Principleof levelling	Participants&facilitator
LUNCH		
01:15 -02:15	• Types of measurements in surveying	Participants&facilitators
02:15-02:30	**SHORT BREAK**	Participants&facilitator
02:30-04:00	• Levelling applications	Participants&facilitator
DAY 2		
08:00-9:30	• Errors andcalibration • Instruments specifications	Participants&facilitator

TEA BREAK		
10:00-11:30	• Traversing • Contouring	Participants&facilitator
11:30-11:45	**SHORT BREAK**	Participants&facilitator
11:45-1:00	• Settingout of curves • Bearingand coordinating	Participants&facilitator
LUNCH		
02:30-4:00	• Field proceduresand settingof instruments	Participants&facilitator

DAY 3		
08:00-09:30	**2. FIELDPRACTICAL** • Field site visit • AssemblingofInstruments • Levellingsurvey • Obstacles/obstruction to measuring • Cut and fill in civil and road works	Participants&facilitator
TEA BREAK		
10:00-11:30	• Field practical cont……..	Participants&facilitator
LUNCH		
1:00-4:00	• Field practical cont……..	Participants&facilitators
DAY 4		
08:00-09:30	• Field site visit • AssemblingofInstruments • Determination of anarea,distance and settingout of angles • Traversing	Participants&facilitator
TEA BREAK		
10:30-01:00	• Field practical cont……..	Participants&facilitator

DAY 5		
08:00-10:30	• Field site visit • AssemblingofInstruments • Contouring • Settingout of curves	Participants&facilitator
TEA BREAK		
11:00-1:00	• Field practical cont……..	Participants&facilitator
LUNCH		
1:30-4:00	• Field practical cont……..	Participants&facilitator