

ARUSHA TECHNICAL COLLEGE

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MECHANICAL ENGINEERING DEPARTMENT

- 1.0. **SHORT COURSE TITLE:** Plumbing and Pipe Fitting.
- 2.0. **HOST DEPARTMENT:** Mechanical Engineering Department
- 3.0. **PLACE/VENUE:** Arusha Technical College (ATC)
- 4.0. **COURSE DURATION:** One (1) week
- 5.0. **COURSE COST:** TZS 400,000 = (tuition fee and training materials only).
- 6.0. **COURSE OBJECTIVES**

6.1. GENERAL OBJECTIVE

This course is designed to equip participants with knowledge, skills and attitudes to enable them to acquire competencies in plumbing and pipe fitting by utilizing the knowledge of mechanical and civil engineering. Plumbing and Pipe Fitting is an old technology which is still useful in our everyday life. This technology enables us to have cold and hot water, gas, or steam in our houses, factories, offices or projects.

6.2. SPECIFIC OBJECTIVES

At the end of the course, a trainee should be able to:

- (i) Fix and fasten pipes
- (ii) Fix and maintain Cold Water Supply.
- (iii) Fix and maintain Hot Water Supply.
- (iv) Water Heating.
- (v) Fix and maintain sanitary appliances.
- (vi) Explain above Ground Drainage.
- (vii) Explain below Ground Drainage.
- (viii) Plumb and draw pipe
- (ix) Plumb, maintain and repair pipes

7.0. TARGET GROUP

Technical personnel; (individuals, groups or institutions) who already have basics in plumbing and pipe fittings but they wish to upgrade their techniques. They can be engineers, technicians and artisans of civil, mechanical, electrical or highway engineering specialization.

8.0. COURSE OUTCOME

Upon completion of the training, the trainee will be able to do simple plumbing and pipe fitting works in buildings or in a fluid transportation project.

TENTATIVE PROGRAM SCHEDULE

MONDAY

TIME	TOPIC	HOURS
14:30 – 16:15	a) Introduction to plumbing technology b) Safety regulations	1.5
16:00 – 16:15	SHORT BREAK	0.25
16:15 – 17:00	Various fittings, tapes and valves	0.75
17.00 – 17.30	Discussion	0.5
Total		3.0

TUESDAY

TIME	TOPIC	HOURS
08:30 – 10:00	Domestic water supply	1.5
10:00 – 10:30	SHORT BREAK	0.5
10:30 – 12:30	a) Cold water supply. b) Hot water supply.	2.0
12:30 – 13:30	LUNCH BREAK	1.0
13:30 – 14:30	Sanitary appliances	1.0
14:30 – 15:30	Above ground drainage	1.0
15:30 – 16:30	Demonstration	1.0
16:30 – 17:30	Discussions	1.0
Total		9.0

WEDNESDAY

TIME	TOPIC	HOURS
14:30 – 16:00	Below ground drainage	1.5
16:00 – 16:15	SHORT BREAK	0.25
16:15 – 17:00	Below ground drainage	0.75
17:00 – 17:30	Demonstration	0.5
Total		3.0

THURSDAY

TIME	TOPIC	HOURS
08:30 – 10:00	Plumbing drawing	1.5
10:00 – 10:30	SHORT BREAK	0.5
10:30 – 12:30	a) Water quality b) Hydraulic principles	2.0
12:30 – 13:30	LUNCH BREAK	1.0
13:30 – 14:30	Plumbing maintenance and repair	1.0
14:30 – 15:30	Demonstration	1.0
15:30 – 16:30	Discursions	1.0
16:30 – 17:30	Award of certificates and closing	1.0
Total		9.0