



AC & Refrigeration for Beginners

Module	Course	Content / Objective	Duration	Unit Standards NQF 2 Learnership
1	Metal Basic 1,2,3,4	Practical tool skills, bending, soldering, brazing, welding, arc welding, measuring, manufacturing frames, brackets, support structures etc.. Implementing all stage from planning, drawing, specifying to produce & manufacture components / parts for installation purpose	4 Weeks	116234 , 116335 116241 , 116245 116696
2	Refrigeration Pipe Installation 1,2,3,4	Plotting & manufacturing of refrigeration components, soldering, brazing, welding, pipe bending with different bending methods, full pipe installation on wall, insulation of pipes, components and ducts.	4 Weeks	116230 , 116229 116712 , 116707
3	Refrigeration Part 1A, 1B,2A, 2B	Mechanical principles of refrigeration cycle and components, connection of service gauges, main components, compression principles, compressor types, refrigeration cycle and components, types of heat exchangers, types of expansion devices, pressure switched and thermostats, reclaiming, recharging. SAFE HANDLING OF REFRIGERANTS	4 Weeks	116236 , 116224 116239 , 116699 116701 , 116702 116334 , 116355
4	Refrigeration Safe Handling	Authorized Practitioner training include: Practical demonstration and hands on, using and reclaim unit and vacuum pump All unit Standards to obtain the level 3 for Refrigeration SAQCC Gas. After successfully completion thereof they can apply for the SAQCC Gas Refrigeration.	1 Week	116223 , 116334 116355 , 116700 116704 , 116468 262159
5	Air-Con Service	Dismantle & Assemble AC & R equipment, remove, install and service bearings, use, maintain service tools and instruments, elementary air-flow measurements & calculations, drawings and sketches	1 Week	116710 , 116238 116701
6	Maths / Physic	Mathematics and Physics applied in refrigeration and air-conditioning (optional for beginners)	2 Weeks	9009 , 7480 , 9008 12444 , 9007 , 13202 9010 , 14106 , 9013 7455 , 9016
7	Electrical 1,2	Physical electricity basics in refrigeration, single and three phase systems, single and three phase motors, starters, pressure and temperature controllers, wiring diagrams for electromechanically controlling, plant protection, motor managements, suction control, defrost control. Electronic motor management, electronic cold rooms controllers.	2 Weeks	116243 , 116463 116466
Quoted prices includes: Work Sheets, Material, Lunch, Tea, Coffee. Pass marks per course 60%. Pass mark for Diploma Test 75%. Pre-requisites: Basic Literacy & Numeracy. Courses are presented in English. All OTTC Courses are Unit Standard aligned. Assessments for NQF Learnership Qualifications of Trade Test testing can be arranged. Select your own Course Dates for the OTTC Calendar.			18 Week's	