



Rev. No. Set 008 28-Apr-18

## OTTC/merSETA - REFRIGERATION MECHANIC Training Plan – 2018

**ALSO INCLUDES THE OTTC PRACTICAL DIPLOMA**

<b>OTTC Director: Mrs. Isolde Döbelin or Maureen Stangherlin Tel/Fax No.: 011-816-2580/011-366-1219</b>			<b>Web: <a href="http://www.ottc-training.center">http://www.ottc-training.center</a></b> <b>Web: <a href="http://www.ottc.co.za">http://www.ottc.co.za</a></b>		<b>E-mail: <a href="mailto:info@ottc.co.za">info@ottc.co.za</a></b> <b>E-mail: <a href="mailto:isolded@ottc.co.za">isolded@ottc.co.za</a></b>	
<b>Client:</b>		<b>Learner:</b>		<b>Fax. No.:</b>		
<b>Contact:</b>		<b>Tel. No.:</b>		<b>E-mail :</b>		
<b>Address</b>		<b>Cell. No.:</b>		<b>LOG BOOK</b>		
Module	Course	Content / Objective Refrigeration Mechanic (Commercial)	Duration	Includes Apprintisan Module Codes		
<b>1</b>	<b>MetB - 1, 2, 3, 4</b>	<b>Metal Basic:</b> Practical tool skills, bending, soldering, brazing, welding, arc welding, measuring, manufacturing frames, brackets, support structures etc. - implement all stages from planning, drawing, specifying to produce & manufacture components / parts for installation purposes.	4 weeks	SF1,SF2,SF3,SF4,SF5,HT1HT2,HT3,HT4,WT1,WT2,W T3,WT39,WT20,WT22,MA1,MA2,MA3,MA5,MA16,MA17,MO1,MT9HS1,HS2,HS3,HS4,HS5,HS7,HS8,AO1,AO2 ,AO3,AO4,GW10,GW11,GC1,GC3,DS1,DS2, DSE4, DSE5,DSE8		
<b>2</b>	<b>RPI - 1, 2, 3, 4</b>	Plotting & manufacturing of refrigeration components, soldering, brazing, welding, arc welding, pipe bending with different bending methods, full pipe installation on wall, insulation of pipes, components and ducts	4 weeks	GW10,GW11,GW12,GW13,GC1,GC2,GC3,DS2,DS3 ,INS2,PF1,PF2,INS1,PF3		
<b>3</b>	<b>PR - 1/ PR - 2</b>	Mechanical principles of refrigeration cycle and components, placement of components, functions of components, practical safe-handling of refrigerant	2 weeks	FN1,REF9,REF10,REF11,REF17,REF18,REF20,ACS1,E V1,LU7,TA1,		
<b>4</b>	<b>Math/ Phys</b>	Theoretical Training Mathematics and Physics applied in refrigeration and air-conditioning and N1, N2	2 weeks	TT1,TT2		
<b>5</b>	<b>R-1 / R-2</b>	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 switches and thermostats, reclaiming and recharging refrigerant	4 weeks	REF2,REF6,REF7,REF9,REF10,REF11,REF12,REF14,R EF15,REF16,REF17,REF18,REF19,EV1,EV2,EV3,LU7,A S1,AS2,AS3,FA4,FA5,FA6,COM7,COM8,GOM9,LU2,IN S1,CODE1,TA1,TT1,TT2		
<b>6</b>	<b>SH-Ref</b>	<b>Authorized Practitioner training includes</b> practical demonstration and hands on, using an reclaim unit and vacuum pump All the Unit Standards to obtain the level 3 for Refrigeration SAQCC Gas. <b>(After successfully completion thereof they can apply for Assessment and the SAQCC Gas Registration)</b>	1 week	<b>Unit Standards</b> 116223, 116334, 116355, 116700, 116704, 116468, 262159		
<b>7</b>	<b>Mech</b>	Mechanical servicing of compressors, repair & overhaul skills, fault identification. Belt drives, pulley alignment. Bearing service, Couplings, Key and Locking Devices	2 week	BE7,BE8,BE9,BE10,CP1,CP2,CP3,CP9,DR12,DR2, DR3,DR4,DR7,AS3,AS7,AS8,AS9,AS10,AS11,AS12,CO M7,COM8,GOM9,LU1,LU2,LU3,PU8,PU9,PU10, WT20		
<b>8</b>	<b>ELC - 1, 2, 3,4,</b>	Physical electricity basics in refrigeration, single and three phase systems, single and three phase motors, starters, pressure and temperature Controllers. Wiring diagrams for electromechanical controlling, plant protection, motor managements, suction control, defrost control. Electronic motor management, soft starter, frequency converters, electronic cold room controllers	4 weeks	FA3,FA4,FA5,FA6,FA7,FA8,DSE1,DSE3, DSE4,ET1,AC5,AC6,AC7,CA1,CA2,CA4,TT2		
<b>9</b>	<b>R - 3/ R - 4</b>	Advanced study of mechanical refrigeration cycle, heat load calculations, cold room design, capacity calculations, food-load, defrost methods; reversed cycles, pressure regulators, humidity control, frequency inverters, methods of energy saving, pump down, Advanced study of system design, h, lg p- diagram, sizing of main components, sizing of pipe-work, oil-problems, fault finding, refrigeration cycle analysis, refrigerant types <b>Condenser &amp; Cooling Towers</b> Air, water, evaporative, forced cooling towers	2 weeks	RSY1, TT2 CT1,CT2,CT3,		
<b>10</b>	<b>AC-Special</b>	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	DSE2,DSE15,DSE17		
<b>11</b>	<b>RPT</b>	Refrigeration plant technical - Final installation, commissioning, charging operating testing of diploma project plant, fault finding	2 weeks	AS3,AS7,AS8,AS9,AS10,AS11,AS12FA3, FA4,FA5,FA6,FA7,FA8,EV3,PF1,PF2,PF3,DSE8,REF14, REF15,IM3,IM4,RSY1,TT2		
<b>12</b>	<b>T - Dip</b>	<b>OTTC Practial Diploma Project and Test</b>	1 week			
<b>Quoted prices include: Work Sheets, Material, Lunch, Tea and Cafe.</b> <b>Pass mark per course 60%, pass mark for diploma test 75% theoretical and practical. Pre-requisites: literacy + numeracy. Courses are presented in English.</b> <b>OTTC training programmes also cover SAQA unit standards, see "OTTC LEARNERSHIP PROGRAMME". Assessments for NQF learnership qualifications and/or trade test testing can be arranged. Select your own course dates from OTTC programme.</b>				<b>R 6000.00 (+VAT) Per week</b> <b>FULL PROGRAM PER PERSON 27 WEEKS</b> <b>excl. VAT</b> <b>Program can be spread over 3.5 Years</b>		
<b>OTTC has full Accreditation for Learners at NQF Level 2,3,4, Certificate No 17-QA/ACC/0333/08</b> <b>© OTTC 2018 all rights reserved</b>				<b>Payment can be paid per week but must be done before course start.</b>		