Award in Refrigeration and Air-Conditioning

Applying for this course

To apply for this course, you should be 16 years of age and who possess MQF Level 2 qualification in Mathematics and English Literacy and have at least two year's work experience in a related field **Or** Individuals who have achieved an MQF Level 2 qualification in Refrigeration and Air-Conditioning (or a similar qualification).. If you do not have these qualifications but possess other qualifications or relevant experience, kindly contact us on qa.jobsplus@gov.mt. stating your ID card number, attaching copies of your qualifications and a copy of your CV highlighting your work experience.

Course Duration

This course is of 95 hours duration and consists of three Modules

- Module 1 is of 11 hours duration - (including 1-hour assessment)
- Module 2 is of 42 hours duration - (including 4-hour assessment)
- Module 3 is of 42 hours duration - (including 4-hour assessment)

General pedagogical guidelines and procedures for this course:

The delivery of this Course will be mainly held through a series of discussions, class work exercises and hands-on training. The trainer will be holding lessons during which learners' will be exposed to the theoretical aspect. Sessions will consist of various presentations, including demonstrations. The practical sessions will be held at Jobsplus' workshop so that the learners are given the opportunity to practice what they are learning.

General assessment policy and procedures for this course:

The learner will undergo an ongoing assessment of learning (including communication skills) and practical exercises that will take place throughout the entire programme. This assessment method gives tutors the opportunity to review and consolidate the learning being covered.

The learner will also be assessed through a written test in each module, consisting of multiple-choice questions, open-ended questions and hands-on questions.

Module 1 Learning Outcomes – **Basic Safe Working Practices & Environmental Impact of RAC Systems**

✓ Maintain and handle tools and equipment in line with health and safety regulations ✓ Carry out tasks following health and safety requirements ✓ Handle hazardous material properly by using the correct waste disposal system depending on the material and using the appropriate PPE Participate in discussions on the concept of climate change ✓ Participate in discussions on the Kyoto Protocol ✓ Learn about Hydrocarbon gases and other possible Fluorinated replacement gases	✓ Participate in discussions on the concept of Global Warming Potential (GWP) and Ozone Depletion Potential (ODP) ✓ Understand the basic components of a RAC system related to refrigerants and emissions ✓ Deal with tasks involving fluorinated greenhouse gases and other substances as refrigerants ✓ Comply with legislation relevant to RAC systems, their installation, repair, maintenance and decommission

Module 1 Assessment: The assessment paper will have only 1 section:

- Section A – a mixture of multiple choice and open ended (short answer) questions. These all need to be answered.

The duration of this assessment is of 1 hour and the pass mark is that of 45%.

Module 2 Learning Outcomes – **THE RAC System**

✓ Be responsible for using the basic ISO standard units for temperature, pressure, mass density & energy ✓ Assemble different components of a RAC system ✓ Install an RAC system ✓ Dismantle an RAC system for cleaning	✓ Clean AC filters ✓ Use indirect methods for checking for RAC system leaks that comply with local and EU regulations ✓ Use direct methods for checking for RAC system leaks which do not entail breaking into the refrigeration circuit and that comply with local and EU regulations

Module 2 Assessment: The assessment paper will be divided into 2 assessment papers, one written and one practical:

- Paper I (written 2 hours) – Split in two Sections. Section A includes multiple-choice questions while Section B includes open ended (short answer) questions.
- Paper II (Practical 2 hours) – Hands-on questions

The total duration of this assessment is of 4 hours, 2 hours for the Paper I and 2 hours for the Paper II, and the pass mark is that of 45% in each paper.

Module 3 Learning Outcomes – **RAC Environmental Working Practices**

✓ Empty and fill a refrigerant cylinder in both liquid and vapour state ✓ Ensure correct use of the equipment used to recover refrigerant ✓ Connect and disconnect the equipment with minimal emissions ✓ Drain fluorinated gas contaminated oil out of a system ✓ Unclog an AC drain	✓ Use Nitrogen to blast systems ✓ Use the appropriate scale correctly to weight refrigerant ✓ Comply with the requirements and procedures for handling, storage and transportation of contaminated refrigerant and oils

Module 3 Assessment: The assessment paper will be divided into 2 assessment papers, one written and one practical:

- Paper I (written 2 hours) – A mixture of multiple-choice questions and open ended (short answer) questions.
- Paper II (Practical 2 hours) – A mixture of calculations, hands-on and open ended (short answer) questions

The total duration of this assessment is of 4 hours, 2 hours for the Paper I and 2 hours for the Paper II, and the pass mark is that of 45% in each paper.

The duration of this assessment is of 4 hours and the pass mark is that of 45%.

The Malta Further and Higher Education Authority (MFHEA) deems this certificate to be at Level 3 of the Malta Qualifications Framework and the European Qualifications Framework for Lifelong Learning. This course comprises study modules to which a total of 6 ECTS points are assigned.