

## Award for Assistant Electrical Fitter (Electrician)

### Applying for this course

To apply for this course, you should be 16 years of age or older and have an MQF Level 1 qualification in English and Mathematics. This course is targeted at those learners who would like to work as electrician's assistants. This course is aimed at those individuals who wish to work in this trade for the very first time, or for those persons who are already working in this profession but wish to further enhance their existing skills. If you do not have these qualifications but possess other qualifications or relevant experience, kindly contact us on [ga.jobsplus@gov.mt](mailto:ga.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 101 hours duration and consists of three Modules

- Module 1 is of 13 hours duration - (including 1-hour assessment)
- Module 2 is of 37 hours duration - (including 2-hour assessment)
- Module 3 is of 51 hours duration - (including 3-hour assessment)

### General pedagogical guidelines and procedures for this course:

The delivery of this Course will be mainly held through a series of discussions and hands-on exercises. The trainer will also be holding lessons with the learners which will consist of various presentations.

### General assessment policy and procedures for this course:

The learner will be assessed through a multiple-choice written test.

The Learner will also be assessed through an Ongoing Assessment that will take place throughout the duration of the course. The ongoing assessment will take into consideration the learner's classroom participation throughout the entire course, and will take place by way of oral exercises, practical exercises, one-to-one questions, and group activities.

In Module 3, the learner will be assessed through a practical test.

### Module 1 Learning Outcomes – Occupational Health and Safety in the Electrical Trade

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| <ul style="list-style-type: none"><li>✓ Comply with electrical trade's best health and safety practices and procedures.</li><li>✓ Deal with the main hazards of working with electricity.</li><li>✓ Carry out tasks implementing the correct electrical protective devices found in electrical installations for basic protection.</li><li>✓ Carry out tasks implementing the correct electrical protective devices found in electrical installations for fault protection</li><li>✓ Carry out tasks utilising the safety features of electrical tools, equipment and installations to minimise risks.</li></ul> | <ul style="list-style-type: none"><li>✓ Ensure the safe and correct use of tools in electrical installations.</li><li>✓ Comply with procedures to safely isolate and ensure discharge of any circuit energy via appropriate discharge earthing</li><li>✓ Be responsible for selecting the most suitable class of fire extinguishers and their appropriate application.</li><li>✓ Comply with the non/statutory and IET regulations when carrying out a given electrical task.</li></ul> |
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<ul style="list-style-type: none"> <li>✓ Ensure that one correctly uses and applies routine maintenance to one's own personal protective equipment typically used in the electrical trade.</li> </ul>	
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**Module 1 Assessment:** The learner will be assessed through a written test.

The assessment paper will have only 1 section – A mixture of multiple-choice questions 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%

<p><b>Module 2 Learning Outcomes – Fundamental Principles of Electrical Technology, Electrical Installation Requirements and Electrical Drawings</b></p>
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<ul style="list-style-type: none"> <li>✓ Ensure that one takes into account the properties of conductors and insulators when working on a given electrical task.</li> <li>✓ Carry out tasks utilising the necessary precautions when handling semiconductor devices.</li> <li>✓ Produce electrical documentation using the correct electrical industry symbols, SI units and their sub/multiples.</li> <li>✓ Carry out electrical calculations using the correct electrical units of measurements.</li> <li>✓ Carry out electrical calculations using Ohm's, Kirchoff's Current Law and Kirchoff's Voltage Law as applicable</li> <li>✓ Calculate the voltage, current, resistance or power in a given DC or AC electrical circuit utilising appropriate electrical formulae</li> <li>✓ Deal with appropriate circuit loading in accordance with the active (kWh), reactive power (kvarh) and the apparent power (kVA) in AC electrical circuits</li> <li>✓ Deal correctly with electrical calculations involving 'temperature coefficient of resistance'</li> <li>✓ Comply with the industry standard coding system used to identify resistor values tolerance and associated ratings such as power when undertaking electrical tasks.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Create an electrical circuit suitable for a given electrical task.</li> <li>✓ Manage measuring instruments and testing meters typically used in the electrical industry.</li> <li>✓ Ensure that the correct switch gear and transformers are used for a given electrical task.</li> <li>✓ Ensure that the correct cable type and size are used for a given electrical project.</li> <li>✓ Collaborate with the licensed electrician in the installation process of typical electrical equipment.</li> <li>✓ Comply with specifications derived from technical diagrams and drawings for an electrical project.</li> <li>✓ Produce single phase schematic circuits &amp; wiring diagrams.</li> <li>✓ Collaborate with the licensed electrician on a given type of installation required by the electrical project.</li> <li>✓ Comply with the requirements of Appliance Classes and Ingress Protection (IP) rating and IK codes when carrying out a given electrical task</li> <li>✓ Collaborate with the licensed electrician on electrical earthing systems checks and installations</li> </ul>
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**Module 2 Assessment:** The learner will be assessed through a written test.

The assessment paper will have only 1 section – A mixture of multiple-choice questions and open ended (short answer questions). These all need to be answered.

The duration of this assessment is of 2 hours and the pass mark is that of 45%.

## Module 3 Learning Outcomes – Practical Electrical Installations and System Testing

<ul style="list-style-type: none"><li>✓ Collaborate with licensed electrician/engineer in installing appropriate electrical hardware for a given electrical project.</li><li>✓ Comply with the specifications derived from schematic circuits and wiring diagrams when working on a given electrical installation.</li><li>✓ Carry out installation tasks that result in ease of maintenance, circuit flexibility and correct load distribution of electrical circuits.</li><li>✓ Collaborate with licensed electrician/engineer when installing flush and surface mounted electrical circuits.</li><li>✓ Deal with the specific installation requirements of Conduit, Cable Trunking, Ladder Racking or Cable Trays installations on a given electrical project</li><li>✓ Collaborate with licensed electrician/engineer on wiring and installation procedures for consumer units / distribution board &amp; internal protective devices</li><li>✓ Carry out surface mount sheeted cable installation tasks in compliance with industry standards</li></ul>	<ul style="list-style-type: none"><li>✓ Collaborate with licensed electrician/engineer on lighting circuit installations including for bell &amp; shaver units (isolation transformer) and PIR motion detection sensors</li><li>✓ Carry out installation tasks of electrical switches and fittings for a given electrical circuit</li><li>✓ Collaborate with licensed electrician/engineer on power circuit installations for given single phase applications</li><li>✓ Collaborate with licensed electrician/engineer on telecommunications circuit installations for given domestic applications</li><li>✓ Collaborate with licensed electrician/engineer in maintenance procedures for earthing systems</li><li>✓ Collaborate with licensed electrician/engineer on domestic electrical appliances installations in single phase applications</li><li>✓ Collaborate with licensed electrician/engineer in locating and repairing electrical fault.</li></ul>
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**Module 3 Assessment:** The learner will be assessed through a written and a practical test.

The assessment will have a written paper which includes multiple choice questions and open-ended (short answer) questions, and a practical component where learners will need to perform a number of tasks.

The duration of this assessment is of 3 hours and the pass mark is 45%.

The Malta Further and Higher Education Authority (MFHEA) deems this certificate to be at Level 2 of the Malta Qualifications Framework and the European Qualifications Framework for Lifelong Learning. This course comprises study modules to which a total of 7 ECTS points are assigned.