

Name of Course - **Award for an Assistant Electrician - EQF / MQF level 2**
Duration: as agreed with management – mornings, afternoons or evenings

Target Group:

For those students who wish to work in the electrical installations industry and desire to obtain a recognized qualification at MQF level 2. Also they will have the opportunity to learn the appropriate way according to the IEE and local Regulations. It is a fact that our local Industry is finding it difficult to find qualified assistant electricians and perform general works concerning electrical installations.

Overall Course Objective:

At the end of the course the learner will be able to carry out a complete basic domestic wiring installation concerning power and lighting circuits according to local and IEE Regulations. The learner will be skillful enough to do specific skills with regards to electrical installations under supervision of a licensed electrician, and be competent enough to read and understand instruction from his superior to do certain works. The learner will also have enough knowledge and information to carry out general works concerning wiring and general practices used for a domestic electrical installation.

By this course the learner is not qualified to perform testing and sign for supply service. A competent and licensed electrician by the MRA is the only person responsible for the installation. Therefore, the Assistant Electrician must follow instructions, be guided and led by a competent licensed electrician or a licensed (warrant) Electrical Engineer. The learner should take responsibility for one's own safety and ensures not to expose others (working mates, clients) to hazards at the workplace.

Learning Outcomes for Communication Skillsⁱ for the whole course

- a) Wire a 3 pin plug and connect it to a load. He /she will be able to choose the best components and selections- including the colouring of wire, fuse and materials used.
- b) Wire and make the right decisions when using and connect protective devices used in distribution boxes and how to wire a domestic distribution board
- c) Wire and make the right decisions to wire a domestic distribution board feeding 2 final circuits and be able to understand a wiring diagram
- d) Wire 2 bulbs in parallel controlled by one switch one gang one way by using sheathed cables
- e) Wire 2 final circuits. Circuit 1 consists of 3 lamps controlled by 2 gang switch and Circuit 2 consists of 3 lamps controlled by a one gang switch. Learning the looping system and wiring method for lighting circuits

- f) Wire 2 final circuits. Progression from previous exercise by using plastic conduit 20mm and fittings. To study how to use numeracy skills for measurements needed and for laying the plastic conduit
- g) Wire the circuitry for a Radial circuit protected by a 20A protective device and be able to follow a wiring diagram To learn how to plan and design a radial circuit feeding power loads. By using 20mm plastic conduit and apply numeracy for measurements purposes
- h) Wire the circuitry for a Ring circuit protected by a 32A protective device and be able to follow a wiring diagram. To study and learn how to plan and design a ring circuit feeding power loads. by using 20mm plastic conduit and apply numeracy skills for measurements purposes
- i) Wire Ring and Radial circuits and wiring method and be able to follow a wiring diagram. Designing of mini trunking applications for power circuits.
- j) Wire a final circuit circuits and wiring method concerning circuits feeding water heaters, cookers etc. and be able to follow a wiring diagram. To learn how to connect a cooker unit and a double pole fused switch. To learn how to plan and design a final circuit feeding a permanent connect load by using 20mm plastic conduit and apply numeracy skills for measurements purposes
- k) Wire a 2 way and intermediate switching to control lamps
- l) Applying different switching to control bulbs
- m) Wire combination of different type of circuits for example Ring, Lighting, bell circuits etc
- n) Perform wiring of complete installations including both lighting and power circuits.
- o) Carry out first aid procedures in case a casualty suffers an electric shock.
- p) Evaluate the difference in metal conduit and metal trunking system including safety procedures
- q) Use a continuity meter and apply testing procedures

Course Outline

1. Introduction to Generation of Electricity & Safety Regulations
2. Supply Voltages and Protection in Electrical Installations. Wiring of Distribution Board
3. A Lighting circuit supplied from a Distribution box and protection used
4. Lighting Circuits using sheathed cables
5. Lighting Circuits using 20mm plastic conduit
6. Power Radial Circuit using 20mm plastic conduit
7. Power Ring Circuit using 20mm plastic conduit
8. Combination of Ring and Radial circuits using mini trunking or 20mm conduit
9. Final Circuits to connect permanent loads as water heaters, AC, cookers etc.
10. 2 way and intermediate lighting circuits and related circuits
11. Combination of a Ring Circuit, Lighting circuits & bell circuits
12. Wiring of a complete installation
13. Basic First Aid & Power tools handling
14. Metal trunking, and metal conduit systems
15. Testing procedures using basic instruments as continuity tester

Course Contact Hours as follows –

Continuous practical assessment – The course covers 15 sessions and after every session students will be given marks on their assignment they do in that particular lesson. Mostly the assignment will be a practical exercise (or a multiple choice exercise when there is theory) – 50% of the course

Students have to fill in a portfolio mostly based on the electrical circuits concerning each module. – 35%. Portfolio is partly filled in class and mostly at home.

By the end of the course students will sit for a theory test based mostly on electrical circuits and general regulations. 15%

If students manage to obtain 70% they will obtain a pass mark and will be awarded the certificate at MQF level 2 - **Award for an Assistant Electrician**. Since it is imperative to tend to own health and safety and that of others, it is necessary to attain such a high pass mark.

15 lessons: 45 hours 15 sessions

Theory Test 2 hours 1 session

Self-Study Hours: 95 hours

General Assessment policy and procedures:

Ongoing Assessment 50% , Portfolio 35%, Theoretical Test 15%

Passing Rate – 70%

Distinction – 90% to 100%

Merit – 75% to 89%

We offer lessons in class or online or when necessary recorded

Entry Minimum Requirements:

- School leaving Certificate

Total Number of ECTS/ECVETs of the module/unit

ECTS/ECVETs – 6

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