



**City & Guilds Accredited
Electrical Testing & Verification of Electrical
Installations Course (2407 - IRL)**

Course Information Pack

Contents

1.Course Info	p. 1
2.Qualification Entry Requirements	p. 3
3.Exams Info & Referrals	p. 5
4.Exams Clarification & Guidelines	p. 6
5.Students Course Work	p. 7

City & Guilds Electrical Testing & Verification of Electrical Installations

(2407-01 – Ireland)

This City & Guilds qualification is designed to train and assess practicing electricians in Ireland on the methods and procedures of inspecting and testing electrical installations to meet the requirements of the Irish regulator, the Commission for Energy Regulation, including Certification and reporting.

This course is compliant with CER's standards, and is recognised by RECI. Upon successful completion of the course, candidates obtain certification which lasts 5 years, and can be used to obtain Qualified Certifier number.

Course Types & Cost

City & Guilds Verification & Certification course is assessment based training programme, which means that in order to obtain qualification and certification from City & Guilds, candidates have to undertake and pass **4 exams**: *Visual Inspection, Initial Testing, Periodic Inspection & Test, and Written Exam*

Future Skills Ireland offers two main types of City & Guilds ET&V course:

- The **3 Day** course is suitable for electricians who are **experienced Testers, and who are familiar with testing, verification, and certification process**. It is an intensive version of the course, and any prospective candidates should take this into account. The price for the course is **€450**.
- The **5 Day** course is intended for electricians who are **new to testing & verification, or have little experience**, and would like to spend more time on mastering the field. The price for the 5 Day course is **€700**.

The price for the course includes certification and registration cost from City & Guilds.

Class sizes are limited to 6 candidates, but we can also arrange evening and weekend courses upon request.

Course Contents

The ET&V course content includes:

- The inspection and test process required for Initial Verification of new electrical installation work
- The inspection and testing process for Periodic Inspections
- Correct methods of completing documentation to regulator's standards
- Safe and correct use of test instruments
- Industry specified methods of testing electrical installations – meeting the requirements of national Rules for Electrical Installations (current edition).

We offer ETCI Rules and meters for the duration of the course. Attendees can use our test equipment, or use their own, provided it has a valid calibration cert that is no more than a year old. The ET&V course is taught in a purpose built workshop, with access to electrical rigs for practice and examination.

Course Entry Requirements

Candidates wishing to participate in the ET&V Course should be **qualified electricians** and have previously obtained a **Level 6 of the NQAI Certificate in Electrical Craft Practice or equivalent**. Attendees should bring their National Craft Cert/Card or equivalent for registration purposes, and as a confirmation of their trade – *please refer to the “Qualification Requirements for QC Applicants” section.*

Results

Upon successful completion of the course (usually up to two weeks after the course), the candidates are issued with provisional results letters which can be used to obtain QC number from RECI straight away.

The certificates come from **City & Guilds** and it normally takes a couple of weeks before they are issued to successful candidates.

If a candidate fails one or more of the assessments required to pass to obtain the City & Guilds award, Future Skills Ireland can arrange repeat session for this candidate at a standard fee, without necessity to repeat the whole course. Please note however, that every repeat enquiry will be entertained individually, depending on the candidate’s performance.

Location

Future Skills Ireland Ltd provides the course at the following address:

- Unit 47B, Keeper Road, Drimnagh, Dublin 12

We offer tea, coffee, and biscuits in the Training Centre for the duration of the course. There are free car park spaces in a very close vicinity of the training premises.

City & Guilds Award Entry Requirements

Required Qualification Documents for candidates without National Electrical Craft Certificate (Table 1):

<u>Category 1</u>	<p><u>Those who completed an apprenticeship before 1st September 1976 must provide either:</u></p> <ul style="list-style-type: none"> ▪ An AnCO Certificate of Completion of Apprenticeship, or ▪ A formal completed Indenture, or ▪ Acceptable documentary evidence of having completed the statutory period of apprenticeship
<u>Category 2</u>	<p><u>Those who completed an apprenticeship between 1st September 1976 and 31st August 1982 must provide:</u></p> <ul style="list-style-type: none"> ▪ Documentary evidence of registration with AnCO ▪ Acceptable documentary evidence of having completed the statutory period of apprenticeship. ▪ Proof of having been awarded the Department of Education Junior or Senior Trade Certificate.
<u>Category 3</u>	<p><u>Those who completed an apprenticeship between the 1st September 1982 and 31st August 1986 must provide:</u></p> <ul style="list-style-type: none"> ▪ Documentary evidence of registration with AnCO ▪ Acceptable documentary evidence of having completed the statutory period of apprenticeship. ▪ Proof of having been awarded the Department of Education Junior Trade Certificate and Senior Trades Practical Examination or Proof of having been awarded the Department of Education Senior Trade Certificate.
<u>Category 4</u>	<p><u>Those who completed an apprenticeship after the 31st of August 1986 must provide:</u></p> <ul style="list-style-type: none"> ▪ Documentary evidence of registration with AnCO / FÁS ▪ Acceptable documentary evidence of having completed the statutory period of apprenticeship. ▪ Proof of having been awarded the Department of Education Senior Trade Certificate

Required UK/City & Guilds Qualification Documents for candidates without National Electrical Craft Certificate (Table 2):

Time Period	C&G Award Number	C&G Award Title
2011 onwards	C&G 2357	Level 3 Diploma in Installing Electro-technical Systems and Equipment (Buildings, Structures and the Environment)
2004 – 2011	C&G 2356	NVQ Level 3 in Electro-technical Services - Electrical Installation (Buildings and Structures)
1999 – 2004	C&G 2355	Installing and Commissioning Electro-technical Systems Level 3
1993 – 1999	C&G 2360 pt1 & C&G 2360 pt2	Electrical Installation Competences Part 1 Electrical Installation Competences Part 2, AM2 Assessment also required
1990 – 1992	C&G 2367 pt1 & C&G 2367 pt2	The Part One Certificate in Electrical Installation Competencies The Part Two Certificate in Electrical Installation Competencies AM2 Assessment also required
1980 – 1990	C&G 2361 pt1 & C&G 2361 pt2	The Part One Certificate in Electrical Installation Work The Part Two Certificate in Electrical Installation Work, AM2 Assessment also required
1970 – 1980	C&G 51A & C&G 51B	The Course A Certificate in Electrical Installation Work The Course B Certificate in Electrical Installation Work

Exams & Referral Info

<i>Exam</i>	<i>Referrals Description</i>
<ul style="list-style-type: none"> Task A – Visual Inspection (0.5 hr) Measures the candidates' electrical experience and knowledge of the 12 related deviations from ETCI National Rules for Electrical Installations Part 4 in respect of the sample domestic installation rig supplied, 	<ul style="list-style-type: none"> - Failure to locate at least 10 out of 12 deviations from ETCI 4th Edition Rules - Failure to correctly identify location - Failure to correctly use the correct terminology when providing information
<ul style="list-style-type: none"> Task B – Initial Test (2 hrs) Test completely 3 circuits as nominated 1 x Lighting + 1x Ring Main + 1x Kitchen radial circuit. Complete Test Record and MIC < 50kVA sheets for the 3 circuits nominated, ignoring all other circuits for testing and documenting purposes. 	<ul style="list-style-type: none"> - Failure to null any test leads used with the test instrument where necessary - Failure to carry out any/all recommended test using suitable method - Failure to carry out recommended stage 1 to 3 Ring Main circuit test - Failure to confirm results and correlation - Failure to correctly identify whether the Ring Main circuit is acceptable - Failure to record all results - Failure to select the correct scale or setting on Test Instrument - Failure to test all parts of a 2 way lighting circuit - Failure to make installation safe before energising. Candidates request for Mains Supply. - Failure to correctly establish the External Fault Loop Impedance (Ze). - Failure to correctly test operation of RCD/RCBO using test instrument - Failure to manually test the RCD (by its integral test button). - Failure to correctly complete Test Record Sheet or Electrical Installation Certificate - Maximum Import Capacity (MIC <50kVA) sheet. All required data.
<ul style="list-style-type: none"> Task C – Periodic Test (2 hrs) Test 3 circuits as nominated 1x Lighting + 1x Shower + 1x Radial. Two circuits will carry faults which the candidate will locate but no further testing progression should take place beyond general or specific fault areas on the Test Record Sheet. Describe the fault using correct terminology; test meter readings, signs, values and symbols are to be inserted where applicable. Detail the fault in the Comment field. Test the 3rd circuit to completion. Ignore all other circuits. Carry all of the 3 nominated circuits required values to the Periodic Sheet and insert where applicable. Complete all periodic details including, but not limited to, – all dates, periodic and sheet numbers, reference numbers, comments and observations and recommendations codes. Do not energise faults or unsafe cabling. Health & Safety. 	<ul style="list-style-type: none"> - Failures as for Task B, except for the Ring Main circuit and Maximum Import Capacity (MIC <50kVA) sheet which are not included in this task. - Failure to correctly identify the 2 number faults or defects introduced - Failure to correctly complete Test Record Sheet or Periodic Inspection Report - all required data. - Failure to correctly complete all suitable recommendations – correct codes.
<ul style="list-style-type: none"> Task D – Written Exam (open book written exam – students' handout and ETCI Rules allowed to use) (1 hr) Demonstrates the candidates' understanding of ETCI Rules and their understanding for the purpose of the Inspection & Testing process. 	<ul style="list-style-type: none"> - Failure to correctly provide 12 answers to 12 number General Electrical Questions

Exams Guidelines & Clarification

- All mobiles and technology must be placed outside the Electrical Workshop Room.
- Every candidate must write their name, date, and starting time given on each Exam paper.
- All Exams must be completed individually without assistance. Candidates are not allowed to communicate with one another during the Exams.
- Exam Papers/Results Sheets must be completed in pen within given time. If using pre pencil, the candidates must allow enough time to pen up their answer sheets. Pencil work will not be accepted.
- Correct values of all readings must be inserted where required.
 - All boxes to be numbered, ticked (✓), or (x) must be completed.
 - Symbols such as: Ω , >, M Ω , V, A must be used where required.
 - Decimal points must always be used in the columns they exist in.
 - Correct terminology is to be used on all answer sheets.
- Example Fault Types should be correctly called as required: open circuit - short circuit - partial short circuit (Ω meter), reverse or cross polarity (Ω meter), high resistance fault (Ω meter), short circuit/insulation resistance fault (M Ω meter), erroneous fault/cross circuit short same phase (M Ω meter), fault type – conductor/s involved L, N, E, meter reading/correct symbol/code number must be noted for successful completion.

SAFETY NOTICE:

DO NOT ENERGISE ANY CIRCUIT CONTAINING FAULT

Student Course Work

- Standard Education Requirements for the course are either an **Electrical Senior Trade** or **Advanced LVL 6 Electrical Certificate**.

- If any student is not in compliance with the educational requirements it will be up to themselves as individuals to make up those gaps, as the Instructor is to deliver the **City & Guilds Electrical Testing & Verification course only, and in no way should this be considered a refresher course from your College or Training Centre days**.

- The Instructor will not be inclined to be repeating instructions or demonstrations, as it is up to the students to take those notes they think they will require for future reference from any verbal, visual or documentation instructions or demonstration. (Consult your Student Handout).

- A demonstration of how we test and document, and of how we expect the students to test and document, will be given where the students get involved with the Test Instruments and documentation.

- We will run through the Student handout where you can highlight certain sections for further reading in your own study-time and also look into the detailed information that is required to get us started for Initial and also Periodic Testing.

- We will sample the ETCI Rules which will highlight some of the changes, and assist with your experience in **Task A Exam** – *Visual Inspection*. This period of reading is a **Lecture**, and if you think that some items needs addressing, please take a note or bullet point, and if the issue has not been resolved by the time we conclude, we may take it up if it is relevant.
