Unit 308: Career awareness in building services engineering

Handout 4: Requirements for operatives

**Learning outcome**

The learner will:

1. Understand the requirements to become a qualified operative in building services engineering.

**Assessment criteria**

The learner can:

2.1 Describe specific requirements for career choices in building services engineering.

**Range**

**Specific requirements**: Qualifications, experience, competency, legal.

# Requirements for operatives

Rather than state that certain qualifications are required, electricians are required to be competent in what they are doing. The measure of competence is decided mainly by the operative’s qualifications and experience. Typical qualifications required to be graded by the Joint Industry Board (J.I.B.) as an electrician are as follows:

## Trainee Electrician (Stage 1)

This stage is aimed at unqualified individuals or operatives with part qualifications **but limited practical site experience,** who, with the support of their employer, are working towards fully skilled status.

All candidates are required to obtain the Certificate in Electrotechnical Technology at Level 2 from either EAL or City & Guilds unless already achieved.

Operatives who already hold the following qualifications are deemed to have satisfied the Level 2 technical certificate criteria:

* City & Guilds 2330 Certificate in Electrotechnical Technology at Level 2 **or**
* City & Guilds 236 Part 1 **or**
* City & Guilds 2360 Part 1 **or**
* City & Guilds 2351 Units 1, 2, 3 & 4 **or**
* EAL Diploma in Electrotechnical Services Units 1, 2, 3, 4, 5 & 6

**Practical experience**: In order to gain practical experience, or improve on their proficiency, a Trainee Electrician (Stage 1) must be working on site, **under close supervision**, carrying out tasks relevant to their level of competence to gain practical site experience in installation techniques and working practices.

**Timeframe**: Dependent upon qualifications and experience at entry, it is expected that this stage will take up to a maximum of two years.

Satisfactory completion of this stage will allow the operative to progress to Trainee Electrician (Stage 2).

## Trainee Electrician (Stage 2)

This stage is aimed at individuals who are progressing from Trainee Electrician (Stage 1) **or** who already hold any of the following qualifications **and** can demonstrate the relevant degree of practical site experience who, with the support of their employer, are working towards fully skilled status:

* City & Guilds 2330 Certificate in Electrotechnical Technology at Level 2 **or**
* City & Guilds 236 Part 1 **or**
* City & Guilds 2360 Part 1 **or**
* City & Guilds 2351 Core Units 1, 2, 3 & 4 **or**
* EAL Diploma in Electrotechnical Services Units 1, 2, 3, 4, 5 & 6

All candidates are required to obtain the Certificate in Electrotechnical Technology at Level 3 from

either EAL or City & Guilds unless already achieved.

Operatives who already hold the following qualifications are deemed to have satisfied the Level 3 technical certificate criteria:

* City & Guilds 2330 Certificate in Electrotechnical Technology at both Level 2 and Level 3 **or**
* City & Guilds 236 Parts 1 and 2 **or**
* City & Guilds 2360 Parts 1 and 2 **or**
* City & Guilds 2351 (**all** eight Units) **or**
* EAL Diploma in Electrotechnical Services Level 3 (**all** ten units)

**Practical experience**: In order to improve on their practical proficiency, Trainee Electricians (Stage 2) must continue to work on site, **under general supervision**, carrying out tasks relevant to their level of competence to gain practical site experience in installation techniques and working practices.

**Timeframe**: Dependent upon qualifications and experience at entry, it is expected that this stage will take up to a maximum of **one year**.

Satisfactory completion of this stage will allow the operative to progress to Trainee Electrician (Stage 3).

## Trainee Electrician (Stage 3)

This stage is aimed at operatives who are progressing from Trainee Electrician (Stage 2), **or** who hold the following qualifications and can provide evidence of a reasonable degree of practical site experience who, with the support of their employer, are working towards fully skilled status:

* City & Guilds 2330 Certificate in Electrotechnical Technology at both Level 2 and Level 3 or
* City & Guilds 236 Parts 1 and 2 or
* City & Guilds 2360 Parts 1 and 2 or
* City & Guilds 2351 (**all** eight Units) or
* EAL Diploma in Electrotechnical Services Level 3 (**all** ten units)

The Trainee Electrician (Stage 3) stage is the final part of the Adult Craft Training Scheme.

Before a skilled grade can be allocated, in order to demonstrate competence in all the appropriate areas defined by the Industry’s Occupational Standards, operatives will be required to attain an NVQ Level 3 in Electrotechnical Services (Installations – Building and Structures).

A competence recognition process has been developed to help individuals put together the evidence required for the NVQ; full details are available from the JIB.

There will be a requirement for the operative to undergo a Practical Performance Assessment test (Achievement Measurement 2).

**Practical experience**: Whilst this process is ongoing, Trainee Electricians (Stage 3) must continue to work on site, **under general supervision**, carrying out tasks relevant to their level of competence.

**Timeframe**: Dependent upon practical experience at the point of entry, it is expected that the evidence collection process will take a maximum of **one year**.

**Change of status**: Following successful completion of all the relevant stages, the operative will be eligible for grading as an Electrician.

Note: SummitSkills full framework completion certificate.

A SummitSkills full framework completion certificate is available directly from SummitSkills to candidates, providing the three Key Skills have also been completed, in addition to the requirements laid out in the JIB Adult Craft Training Scheme.

## Electrician

**Qualifications and Training**: must satisfy the following conditions:

**NB**: The requirements of this grade must be fully met but it is not a requirement to have been previously graded for an application to be successful.

1. Must have been a registered Apprentice or undergone some equivalent method of training and have had practical training in electrical installation work.
2. Must have obtained a Level 3 NVQ in Electrotechnical Services (Electrical Installation – Buildings & Structures) or the Level 3 NVQ Diploma in Installing Electrotechnical systems and equipment (buildings, structures and the environment) (or approved equivalent) (see Note 1).
3. Must have obtained the Level 3 technical certificate relevant to the NVQ either as part of the NVQ Diploma or as a separate qualification (such as the City & Guilds 2360 Electrical Installation Theory and Practice Part 2 or Level 3 Certificate in Electrotechnical Technology (or approved equivalent)).

**Note 1:** If the applicant meets the other two criteria but has not achieved an NVQ Level 3 in electrical installation, then a **Provisional** grading may be awarded if the following criteria are both satisfied:

1. Have obtained the Level 3 technical certificate relevant to the NVQ, either as unit accreditation to the NVQ Diploma or as a separate qualification (such as the City & Guilds 2360 Electrical Installation Theory and Practice Part 2 or Level 3 Certificate in Electrotechnical Technology (or approved equivalent)).
2. Have obtained Achievement Measurement 2.

**Duties:** Must be able to carry out electrical installation work efficiently and in accordance with the National Working Rules for the Electrical Contracting Industry, the current IET Wiring Regulations for the Requirements of Electrical Installations BS 7671, and the Construction Industry Safety Regulations.

## Approved Electrician

**Qualifications and Training**: Must satisfy the following conditions:

**NB1**: The requirements of this grade must be fully met but it is not a requirement to have been previously graded for an application to be successful.

**NB2:** For the avoidance of doubt, previous Inspection and Testing qualifications remain valid, and individuals who have already achieved Approved Electrician grading within the ECS are not required to undertake the new qualifications.

1. Must have fully met the requirements for the grade of Electrician.
2. Must have had two years’ experience working as an Electrician subsequent to the satisfactory completion of training and immediately prior to the application for this grade.
3. Must have demonstrated competence in Inspection and Testing and obtained either the Level 3 Certificate in the Certification of Electrical Installations (inspection, testing and certification of electrical installations) or both the Level 3 Award in the Initial Verification and Certification of Electrical Installations and the Level 3 Award in the Periodic, Inspection, Testing and Certification of Electrical Installations (see Note 1).

**Duties**: Approved Electricians must possess particular practical, productive and electrical engineering skills with adequate technical supervisory knowledge so as to be able to work on their own proficiently and carry out electrical installation work without immediate supervision in the most efficient and economical manner; be able to set out jobs from drawings and specifications and requisition the necessary installation materials; be able to accept responsibility for the proper completion of jobs and, if required, supervise other operatives.

They must also have a thorough working knowledge of the National Working Rules for the Electrical Contracting Industry, of the current IEE Regulations for Electrical Installations, of the Electricity Supply Regulations, 1988, issued by the Electricity Commissioners so far as they deal with Consumers’ Installations (ie Regulations 22-29 inclusive and 31), of any Regulations dealing with Consumers’ Installations which may be issued, relevant British Standards and Codes of Practice, and of the Construction Industry Safety Regulations.

## Technician

**Qualifications and Training**: Must satisfy the following three conditions:

**NB**: The requirements of this grade must be fully met but it is not a requirement to have been previously graded for an application to be successful.

1. Must have fully met the requirements for the grade of Approved Electrician.
2. Must have obtained a higher technical qualification (the City & Guilds ‘C’ Course Certificate or a Level 4 technical certificate in Building Services Engineering with an Electrical Installation bias (such as an HNC or approved equivalent) (see note 1).
3. Either (a) **Site Technician**

Must have at least five years’ experience as an Approved Electrician, including a minimum of three years in a supervisory capacity in charge of electrical installations of such complexity and dimension as to require wide technical experience and organisational ability. Where an operative can, subject to confirmation, demonstrate exceptional practical site supervisory skills and experience the requirements for formal qualifications set out in (2) above may be varied by the appropriate Regional JIB.

Or (b) **Installation Technician**

Must have, with the support of the employer, exceptional technical skill, ability and experience beyond that expected of an Approved Electrician, so that his value to the employer would be as if he were qualified as a Technician under (a) above.

Note 1: Applicants may also meet the qualification requirements for Site Technician if they hold the City & Guilds 2400 Design, Erection and Verification of Electrical Installations, or the City & Guilds 2396 or the EAL Level 4 Award in the Design and Verification of Electrical Installations.

**Duties**: Technicians must have knowledge of the most economical and effective layout of electrical installations together with the ability to achieve a high level of productivity in the work that they control.

They must also be able to apply a thorough working knowledge of the National Working Rules for the Electrical Contracting Industry, the current IET Wiring Regulations for the Requirements of Electrical Installations BS7671, of the Electricity at Work Regulations, the Electricity Safety, Quality and Continuity Regulations, or any Regulations dealing with Consumers’ Installations which may be issued, relevant British Standards and Codes of Practice, and of the Construction Industry Safety Regulations.

**NB**: All information taken from the J.I.B. Handbook 2014