

## Advanced Electrical Engineering Apprenticeship Standard

### Installation Electrician / Maintenance Electrician (Standard)

<b>Sector</b>	Advanced Manufacturing (England) EAL
<b>Level</b>	3
<b>Guided Learning Hours (Off the Job)</b>	763 hours = Development Knowledge
<b>Total Course length</b>	42 Months = Then 6 months for end point assessment
<b>Minimum age of learner</b>	16 years
<b>Cost / Funding</b>	£18000 ( £0 age 18 under / 5% £900 age19+)

#### Occupational profile

Electricians install, maintain and repair electrical systems in industrial, commercial and domestic environments. Electricians might work in both indoor and outdoor settings. Electrical equipment and systems may include switchboards, motors, cables, fuses, thermal relays, fault current protection switches, heating, lighting, air conditioning and metering equipment as well as crime and fire alarm systems and renewable energy technologies. They are able to work on their own proficiently and work without immediate supervision in the most efficient and economical manner.

They may contribute to the design of electrical systems. They are able to set out jobs from drawings and specifications and requisition the necessary installation materials.

Electrical safety is an important area of Electricians' work. On completion of their work the electrical systems must be safe to use. They must adhere to safe working practices without endangering themselves or others.

Installation Electricians work on the installation, testing, commissioning and maintenance of low voltage (less than 1000v) electrical and electronic devices and appliances.

Maintenance Electricians work on the maintenance of electrical and electronic installations including automated production systems. Duties include the supervision of the equipment, its maintenance and necessary repairs.

Mandatory requirements	Functional Skills	Level
	Math English	2 2
<b>Qualification and Skills</b>	GCSE 5 and above in Math's, Science & English AM2S	
<b>Knowledge, Skills and Behavior (KSB)</b>	Installation electrician / maintenance electrician (Standard)	
<b>Employer Rights and Responsibilities</b>	EAL level 2 Award in employer rights and responsibilities for new entrant into the science, engineering and manufacturing sector (QCF)	
<b>Personal Learning and Thinking Skills</b>	Creative thinking Reflective Learning Self-management	Independent enquiry Team Working Effective participation

Level 3 Knowledge		Class Room Based	Months 1 to 42
3	NETK3/01	Understand Health, Safety & Environmental Considerations	
3	NETK3/03	Understand How to Plan and Oversee Electrical Work Activities	
3	NEKT3/04	Understand Design & Installation Practices & Procedures	
3	NEKT3/05	Understand Terminations & Connections of Conductors	
3	NEKT3/06	Understand Inspection, Testing & Commissioning	
3	NEKT3/07	Understand Fault Diagnosis & Rectification	
3	NEKT3/08	Electrical Scientific Principles & Technologies	
3	NETK3/18ED	Understand the Requirements for Electrical Installations BS7671:2018	
Level 3 Performance Units		Portfolio Evidence	Months 1 to 42
LEVEL	UNIT No	UNIT TITLE	
3	NEPT3/01	Apply Health, Safety & Environmental Considerations	
3	NEPT3/03	Organise & Oversee the Electrical Work Environment	
3	NEPT3/05	Terminate & Connect Conductors	
3	NEPT3/06	Inspect, Test & Commissioning Electrical Systems	
3	NEPT3/07	Apply Fault Diagnosis & Rectification	
3	NEPT3/04	Apply Design & Installation Practice & Procedures	
3	NEPT3/09	Apply Practices & Procedures for Maintenance	

## Knowledge, Skills and Behavior (KSB)

<b>Qualification Progression</b>	Advanced level 4 HNC apprenticeship.
<b>Job role progression opportunities:</b>	Apprentices will start off by carrying out semi-skilled job roles within manufacturing and engineering industry. It is likely that a period of consolidation will be required in these roles before progression can take place. Most will aspire to a combination of internal promotion within their companies to team leader or supervisor level, while at the same time this affords the opportunity to undertake Further Education qualifications or an Advanced Apprenticeship to upgrade their competence and knowledge to fully skilled status.