Fire Emergency and Security Systems Apprenticeship standard

Occupation title
Fire, Emergency and Security Systems Technician

Generic job titles recognised across the industry
Alarm/Fire/Emergency/Security Systems: Installer/Maintainer/Engineer/Technician

Occupational profile
Fire, Emergency and Security Systems Technicians design, install, commission and maintain electronic systems in and outside simple and complex premises to protect individuals, homes and properties from risk and danger.

Systems include fire, security and emergency systems to detect intrusion, provide surveillance, monitor and control access to buildings, properties and sites or to detect fire and emergencies.

Skills include interconnection of equipment, programming, verifying performance/fault finding and testing and maintaining.

Technicians will carry out planned jobs to install new systems, modify and maintain existing systems as well as respond to call-outs to repair faulty systems where they will utilise their problem solving skills.

They will take a professional approach to customer service skills which include being presentable, tidy and respectful as they can often find themselves working in and outside customers' homes as well as in and outside business premises.

It is important for Fire, Emergency and Security Systems Technicians to be able to work independently or as part of a team and use their knowledge and skills to ensure systems have been appropriately selected and installed and maintained to a professional industry standards, often without any supervision, and done so in a safe, efficient and economical manner to minimise waste.

Core Knowledge and Skills Requirements
The Fire, Emergency and Security Systems Technician will understand:

Knowledge	**What is required**
Health and Safety	Health and safety legislation, codes of practice and safe working practices.
Electrical and electronic principles	Installation and testing techniques for electrical and electronic components, equipment and control systems for fire, emergency and security systems.
Practices and procedures	Fundamental principles and quality processes associated with industry/company codes of practices.
Core Systems	Fundamental design criteria, installation, commissioning and maintenance of fire, emergency, security systems and components.
System technologies	How to store, retrieve, manipulate, transmit or receive data/information electronically in a digital form across a range of ICT applications (e.g. personal computers, digital transmission over IP, email, mobile communication technology).
Environmental principles	Compliance to environmental legislation and the impact of processes and technologies associated with fire, emergency and security systems.
Customer service	Principles of high quality customer service and the needs of others.
Communication	Different communication styles, how to communicate in a clear, articulate and appropriate manner and how to adapt communication style to suit different situations.
Commercial awareness	Commercial risks and responsibilities.

The Fire, Emergency and Security Systems Technician will:

Skills	**What is required**
Working safely	Operate in a safe working manner by adhering to health and safety legislation, codes of practice and applying safe working practices.
Core systems techniques	Contribute to the application of design, planning, installation, testing, commissioning, maintenance, fault diagnosis, service and repair and electrical and electronic techniques on fire, emergency and security systems.
System technologies	Operate a range of ICT equipment and systems to store, retrieve, manipulate, transmit or receive digital data and electronic information in applications and environments applicable to the role.
Supervisory	Take responsibility for own work and safety and welfare of others. Oversee and organise the programme of work and work environment. Carry out work and manage resources in an environmentally friendly manner.

Behaviours	What is required
Honesty and Integrity	Develop and retain trust with customers and colleagues by undertaking responsibilities in an ethical and empathetic manner.
Dependable and responsible	Show commitment through being punctual, reliable, diligent and professional. Take responsibility for own judgements and actions to achieve quality focussed outcomes.
Positive can-do attitude	Demonstrate drive and flexibility in fulfilling requirements of role.
Openness to learning	Take responsibility and fulfil own development and the needs of others. Keep up-to-date with best practice. Maintain continuous professional development.
Work with others	Work productively and engage with colleagues, clients, other trades, suppliers and the public.
Safe and Sustainable working	Take responsibility for promoting a healthy and safe working environment. Give consideration to appropriate use of resources and own actions taking into account the impact on environmental, social and economic factors.

Options

In addition to the core skills, knowledge and behaviour requirements, apprentices must choose one of the following options:

Options	Knowledge	Skills
Fire	Understand: the relationship of fire detection and alarms to the fire industry, the principles and features for design criteria, and the methods of surveying new and existing systems. The Planning and project management for system installation, commissioning and handover. The preventative and corrective maintenance of fire detection and alarm systems, emergency systems and components.	Apply and implement system design, planning, installation, testing, commissioning and handover. Carry out preventative and corrective maintenance, diagnosis and repair faults, of fire detection and alarm and other emergency systems and components.
Security	Understand: the requirement and implementation of security risk assessments, the principles, functions and operation for design criteria. The planning and project management for system installation, commissioning and handover. The preventative and corrective maintenance of Intruder and hold up alarms, Access Control, video surveillance (CCTV) and other electronic security systems and components.	Apply and implement system design, planning, installation, testing, commissioning and handover. Carry out preventative and corrective maintenance, diagnosis and repair faults, of Intruder and holdup alarms, Access Control, video surveillance (CCTV) and other electronic security systems and components.
Fire and emergency lighting	Understand: The relationship of fire detection and alarms to the fire industry, the principles and features for design criteria, and the methods of surveying new and existing systems. The Planning and project management for system installation, commissioning and handover. The preventative and corrective maintenance of fire detection and alarm systems, emergency lighting, emergency systems and components. The installation of electrical circuits, selecting correct protective devices, testing and certifying to current standards.	Apply and implement system design, planning, installation where required, testing, commissioning and handover. Carry out preventative and corrective maintenance, diagnosis and repair faults, of fire detection and alarm, emergency light systems and other emergency systems and components.
Fire and Security	Understand: the relationship of fire detection and security alarms to the fire & security industry and the requirement and implementation of security risk assessments, the principles, features, functions and operation for design criteria, and the methods of surveying new and existing systems. The Planning and project management for systems installation, commissioning and handover. The preventative and corrective maintenance of fire detection and alarm	Apply and implement system design, planning, installation, testing, commissioning and handover. Carry out preventative and corrective maintenance, diagnosis and repair faults, of fire detection and alarm, and other emergency systems and components, Intruder and holdup alarms, Access Control, video surveillance (CCTV) and other electronic security systems and components.

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Duration:
Typical completion time is likely to be 36 months. This may reduce if an apprentice has gained previous relevant knowledge and skills, through Recognised Prior Learning.

Entry Requirements and Qualifications:
Entry requirements will be determined by individual employers. Initial assessment of literacy and numeracy on entry to the Apprenticeship should show potential to achieve the main outcomes of the programme. Apprentices without level 2 English and Maths will need to achieve this level prior to completion of their Apprenticeship.

Link to professional registration:
By the end of this apprenticeship the candidate will have satisfied the requirements for registration as EngTech by the Engineering Council.

Level:
This is a level 3 Apprenticeship.

Review date:
This Apprenticeship standard will be reviewed in three years.