

A Career within Service, Maintain and Commission Building Engineering Services

**2019**

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***A Career in Service, Maintain & Commission Building Engineering Services***

Today’s market is looking for engineers that are multi-skilled and have the range of technical knowledge and applied skills to undertake the scope and range of work within an employer’s portfolio.

Glasgow Kelvin College have been providing such personnel for the past 19 years through their highly successful Service, Maintenance and Commissioning of Building Engineering Services Modern Apprenticeship. We currently have over 100 such apprentices attending Glasgow Kelvin College.

Businesses are now demanding trade-persons that can attend client’s sites and thereafter are able to work on a range of Building Engineering Services plant and equipment. This allows the company to save money by adopting a far more flexible business plan. The workforce has a bigger range of skills spread throughout the business.

Adopting this approach allows out of normal working hour activities, such as call-outs to be spread equally throughout the workforce . It further alleviates the problems of having to send engineers to geographical locations to attend specific maintenance issues that may have been dealt with by an engineer closer in proximity to the premises.

In training to become a Service and Maintenance engineer you will be trained and assessed in the following areas.

* **Heating**
* LTHW installations, sealed and vented, MTHW, HTHW, Steam
* Copper and steel installation and jointing methods
* Primary and Secondary heating controls
* Heating layouts
* Fault diagnostics on heating systems
* Service and maintenance on heating systems and their components
* Modern building services control systems i.e. optimisers/compensators.



* **Hot & Cold water systems**
* Cold water layouts (direct and indirect etc)
* Hot water services
* Water regulations
* Boosted cold water
* Control of Legionellosis including chemical and thermal disinfection practices, temperature controls, record keeping etc.
* Water quality practices
* Controls
* Vented & Un-vented DHW installations



* **Electrical**
* Electrical theory
* Electrical controls
* Electrical test equipment
* Operating on single and three phase systems and components
* 18th edition regulations
* Safe isolation
* Fault diagnostics
* Small electrical installations



* **Air conditioning & ventilation**
* System types
* Fans
* Refrigeration cycle
* Psychometric charts
* Safe handling of refrigerants
* Controls
* Air handling units
* Air filtration
* Service and maintenance on systems & components



* **Natural/Propane gas, oil, electric boilers**
* Fuels characteristics
* Boilers (forced and natural draught)
* Gas regulations
* Gas tightness testing, appliance commissioning, servicing and maintenance practices
* Combustion testing and analysis
* Oil storage layouts
* Oil regulations
* Service and maintenance on systems & components
* Gas fired indirect/direct air heaters and radiant tube and plaque heaters i.e. Powermatic and ambi-rads.



* **Regulations, British standards**
* All students will be shown, trained and tested on all relevant legislation, British standards and ACOPs on all of the engineering areas which make up the course.
* Service and maintenance apprentices will be trained on operational procedures necessary to work within the industry. Students will be shown how to plan and understand the service and maintenance industries guidelines and how to conduct themselves within the work environment.

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* **Health and safety**
* All students will be shown and tested on the relevant health and safety regulations, and will put into practice in the workshop environment i.e. hard hat, goggles, risk assessment, method statements and permit to work systems.
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***Note; The list above is not exhaustive and is representative of a sample of the extensive course content.***

All students will be trained and thereafter allowed to gain practical experience within the workshop and onsite, be taught the range of theory appropriate to their course and ultimately assessed to ensure they are competent in practice as well as in theory.

As the college is relatively newly built, the workshops have been designed and installed to ensure the students will receive a variety and realistic modern scope of work, similar to that installed in most modern plant-room environments.

In the Last year of the apprenticeship and integrated with the apprentice’s SVQ we will provide the training to allow each employer to enlist their students on additional professional competency courses at assessment only costs i.e. ACS Commercial Gas Package, Control of Legionellosis, IEE 17th Edition, Safe Handling of Refrigerant Gases, Brazing. OFTEC Oil and Unvented Hot Water.

Previous students at the college have now excelled in the workplace and this is testament to the training and apprenticeship they have been given, many former students are now managers, supervisors, chief engineers, owners and company directors, plying their skills within the industry.