

# Industry Standards – Gas

## Gas engineering

Gas engineering involves the safe installation, commission, decommission and the on-going service and repair of gas appliances in either a domestic or non-domestic setting. Appliances can include, but are not limited to, a range of work categories such as central heating boilers, unvented hot water storage, ducted air heaters, cookers, space heaters, meters, alternative fuel, boosters, testing and purging for industrial pipework. Roles in gas engineering will include explaining how installations and appliances work, providing energy efficiency advice and ensuring customer service excellence at all times. Gas engineering operates strictly within the requirements of health and safety legislation. Roles in gas engineering may involve working on either natural gas and / or LPG appliances, lifting and moving of equipment, working at heights and working in confined spaces.

All gas engineers must be registered on the Gas Safe<sup>®</sup> Register for each appliance in which they are competent to undertake work on.

## Domestic Gas engineering

### Unit detail:

- Induction unit (A)
- All units from common core groups B1 and B2
- **4** mandatory (M) units from specialist group C
- A **minimum of 4** optional units from specialist group C

Induction - Core Requirements (A)		
Unit Code	Title	Internal Ref
	<a href="#">Download all Induction Units here</a>	
IND01	Health, Safety and the Environment	2550
IND02	Risk Assessment	2550
IND03	Personal Protective Equipment (PPE)	2550
IND04	Lone Working	2550
IND05	Asbestos Awareness	2550
IND06	First Aid	2550
IND07	Manual Handling	2550
IND08	Operational Procedures	2550
IND09	Fire and Emergency Procedures	2550
IND10	Drug and Alcohol Awareness	2550
IND11	Equality & Diversity	2550
IND12	Customer Focus	2550
IND13	Team Working a) Working with Others b) Interpersonal Skills	2550
IND14	COSHH	2550
IND15	Data Protection (Including IT)	2550
IND16	Industry Regulation	2550
IND17	Hand and Power Tool Awareness	2550
IND18	Gas Industry Appreciation	2550
IND19	Work at Height	2550
IND20	Awareness of Confined Spaces	2550
IND21	Energy Efficiency Awareness	2550

B1. Common Core Mandatory Units - Knowledge		
Unit Code	Title	Internal Ref
GE01	<a href="#">Characteristics of Gas – 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> family gases</a>	2552
GE02	<a href="#">Principles of Combustion and Combustion Analysis</a>	2553
GE03	<a href="#">Understanding of Flues</a>	2554

GE04	<a href="#">Principles of Ventilation</a>	2555
GE05	<a href="#">Principles of Gas Tightness Testing and Purging</a>	2556
GE06	<a href="#">Understand Statutory and Normative Documents within the Gas Industry</a>	2557
GE07	<a href="#">Principles of Calibration and Equipment Maintenance</a>	2558
GE08	<a href="#">Principles of Pressure and Flow Operations</a>	2559

### B2. Common Core Mandatory Units - Competence

Unit Code	Title	Internal Ref
GE09	<a href="#">Electrical Awareness, Electrical Safety Checks and Safe Isolation of Electrical Equipment</a>	2560
GE10	<a href="#">Understand and Implement Unsafe Situations and Emergency Procedures in the Gas Industry</a>	2561
GE11	<a href="#">Pipework Jointing Methods and Skills</a>	2562
GE12	<a href="#">Investigate CO Alarm Activations, Reports of Smells and Fumes and CO Monitoring</a>	2563
GE13	<a href="#">Property Reinstatement and Clearing Site on Completion of Work</a>	2564
GE14	<a href="#">Gas Rating Operations</a>	2565
GE15	<a href="#">Carry out Gas Safe Isolation and Safety Checks</a>	2566
GE16	<a href="#">Identification of Gas Safety Controls and Proving their Safe Operation</a>	2567
GE17	<a href="#">Completing Gas Industry Documentation</a>	2568

### C1. Technical Domestic Engineering – Specialist Mandatory Units

Unit Code	Title	Internal Ref
GEDM01	<a href="#">Carry out Checks and Tests on Domestic Flues</a>	2571
GEDM02	<a href="#">Domestic Gas Ventilation Operations</a>	2572
GEDM03	<a href="#">Carry out Domestic Gas Tightness Testing &amp; Purging</a>	2573
GEDM04	<a href="#">Domestic Gas Pipework Skills</a>	2574

#### Optional Units – a minimum of 4 must be taken

Unit Code	Title	Internal Ref
GEDO01	<a href="#">Install, Commission, De-commission, Maintenance and Repair Domestic Gas Cooking Appliances</a>	2575
GEDO02	<a href="#">Install, Commission, De-commission, Maintain and Repair Domestic Gas Laundry Appliances</a>	2576
GEDO03	<a href="#">Maintain and Install Domestic Gas Ducted Air Heaters</a>	2577
GEDO04	<a href="#">Maintain and Install Domestic Gas Fires and Space Heaters</a>	2578

GEDO05	<a href="#">Install, Commission and Fault Find - Domestic Gas Central Heating Boilers</a>	2579
GEDO06	<a href="#">Install, Exchange and Fault Find on Gas Meters up to 16m<sup>3</sup> per hour on Low and Medium Pressure Installations</a>	2580
GEO01	<a href="#">Unvented Hot Water Storage Operations (including water regulations)</a>	2936
GEO02	<a href="#">LPG Including Residential Park Homes, Leisure Vehicles and Boats</a>	2595

Additional Optional Units		
Unit Code	Title	Internal Ref
GEDAO01	<a href="#">Domestic Gas Heating and Hot Water System Design</a>	2569
GEDAO02	<a href="#">Domestic Gas Heating and Hot Water System – Fault Finding and Electrical Diagnostics</a>	2570

## Non-domestic Gas engineering

### Unit detail:

- Induction unit (A)
- All units from common core groups B1 and B2
- **5 mandatory** units from specialist group C
- A minimum of 3 optional units from specialist group C

Induction - Core Requirements (A)		
Unit Code	Title	Internal Ref
	<a href="#">Download all Induction Units here</a>	
IND01	Health, Safety and the Environment	2550
IND02	Risk Assessment	2550
IND03	Personal Protective Equipment (PPE)	2550
IND04	Lone Working	2550
IND05	Asbestos Awareness	2550
IND06	First Aid	2550
IND07	Manual Handling	2550
IND08	Operational Procedures	2550
IND09	Fire and Emergency Procedures	2550
IND10	Drug and Alcohol Awareness	2550
IND11	Equality & Diversity	2550
IND12	Customer Focus	2550
IND13	Team Working: c) Working with Others d) Interpersonal Skills	2550
IND14	COSHH	2550
IND15	Data Protection (Including IT)	2550
IND16	Industry Regulation	2550
IND17	Hand and Power Tool Awareness	2550
IND18	Gas Industry Appreciation	2550
IND19	Work at Height	2550
IND20	Awareness of Confined Spaces	2550
IND21	Energy Efficiency Awareness	2550

B1. Common Core Mandatory Units - Knowledge		
Unit Code	Title	Internal Ref
GE01	<a href="#">Characteristics of Gas – 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> family gases</a>	2552
GE02	<a href="#">Principles of Combustion and Combustion Analysis</a>	2553
GE03	<a href="#">Understanding of Flues</a>	2554

GE04	<a href="#">Principles of Ventilation</a>	2555
GE05	<a href="#">Principles of Gas Tightness Testing and Purging</a>	2556
GE06	<a href="#">Understand Statutory and Normative Documents within the Gas Industry</a>	2557
GE07	<a href="#">Principles of Calibration and Equipment Maintenance</a>	2558
GE08	<a href="#">Principles of Pressure and Flow Operations</a>	2559

### B2. Common Core Mandatory Units - Competence

Unit Code	Title	Internal Ref
GE09	<a href="#">Electrical Awareness, Electrical Safety Checks and Safe Isolation of Electrical Equipment</a>	2560
GE10	<a href="#">Understand and Implement Unsafe Situations and Emergency Procedures in the Gas Industry</a>	2561
GE11	<a href="#">Pipework Jointing Methods and Skills</a>	2562
GE12	<a href="#">Investigate CO Alarm Activations, Reports of Smells and Fumes and CO Monitoring</a>	2563
GE13	<a href="#">Property Reinstatement and Clearing Site on Completion of Work</a>	2564
GE14	<a href="#">Gas Rating Operations</a>	2565
GE15	<a href="#">Carry out Gas Safe Isolation and Safety Checks</a>	2566
GE16	<a href="#">Identification of Gas Safety Controls and Proving their Safe Operation</a>	2567
GE17	<a href="#">Completing Gas Industry Documentation</a>	2568

### C2. Technical Non-domestic Engineering – Specialist Mandatory Units

Unit Code	Title	Internal Ref
GENDM01	<a href="#">Non-domestic Gas Flues and Ventilation Operations</a>	2583
GENDM02	<a href="#">Non-domestic Gas System Tightness Testing &amp; Purging</a>	2584
GENDM03	<a href="#">Safe Isolation of 3-phase Electrics</a>	2585
GENDM04	<a href="#">Pipework and Welding Operations</a>	2586
GENDM05	<a href="#">Combustion Analysis</a>	2587

#### Optional Units – a minimum of 5 must be taken

Unit Code	Title	Internal Ref
GENDO01	<a href="#">Commission, Maintain and Fault Find – Gas-fired Package Burners</a>	2588
GENDO02	<a href="#">Commissioning of Non-Domestic Gas-fired Plant</a>	2589
GENDO03	<a href="#">Commission, Service and Fault Find on Indirect Fired Gas Heating Appliances</a>	2590
GENDO04	<a href="#">Commission, Service and Fault Find on Direct Fired Gas Heating Appliances</a>	2591

GENDO05	<a href="#"><u>Install, Exchange, Commission and Decommission Non-domestic Diaphragm and Rotary Gas Meters</u></a>	2592
GENDO06	<a href="#"><u>Commission, Service and Fault Find on Gas-fired Radiant Tube Heaters</u></a>	2593
GENDO07	<a href="#"><u>Install, Commission, Service and Fault Find – Non-domestic Gas Boosters</u></a>	2594
GEO01	<a href="#"><u>Unvented Hot Water Storage Operations and Water Regulations</u></a>	2936
GEO02	<a href="#"><u>LPG Including Residential Park Homes, Leisure Vehicles and Boats</u></a>	2595
<b>Additional Optional Units</b>		
Unit Code	Title	Internal Ref
GENDAO01	<a href="#"><u>Non-domestic Gas Heating and Hot Water System Design</u></a>	2581
GENDAO02	<a href="#"><u>Non-domestic Gas Heating and Hot Water System - Fault Finding and Electrical Diagnostics</u></a>	2582