

## I-GAS structure

**Note – All courses are aimed at gas equipment and networks operating up to 15bar only. Above this limit customers will need to source additional specific training.**

Level	1	2	3	4	5
Title	Entry portfolio	Industrial Gas <b>Maintenance</b>	Industrial Gas <b>Technician</b>	Industrial Gas <b>Engineer</b>	Industrial Gas <b>Designer</b>
Scope	New entrants, possibly with limited gas experience.  Off line course and home study to familiarise candidates with gas industry standards, legislation and procedures.	Safe procedures for gas work, breaking into gas ways, repairing or replacing gas line components 'like-for-like', strength test, tightness testing, purging & relighting end of line equipment. 2nd family gases only. Able to supervise gas contractors.	Work on gas pipework; understand combustion principles and equipment. Combustion analysis and emissions. Setting regulators. Add 3 <sup>rd</sup> family gases and higher pressures.	Pipework design, strength testing, Pipeline replacement and modifications to installations (incl. "component change" procedures), and gas system commissioning. Add 1st family gases.	New installation design and certification. DSEAR and risk assessments. Gas installation projects.
Pre-requisites	Technical apprenticeship or other technical training (possibly outside of gas industry)	Level 1 OR CODNCO or COCN1 PI1LS OR relevant training*	Level 2 OR <u>current</u> COCN1 and TPCP1 OR industry standard relevant training*	Level 3 OR industry standard relevant training* plus Pipework design exercise	Level 4 OR industry standard relevant training*
Practical experience	Some gas work experience	Some gas work experience; 6 months working around systems or specific equipment.	Whole gas system interaction from ECV to gas using equipment. LPG	Whole gas system interaction from ECV to gas using equipment. Manufactured gases.	Gas system design and risk assessment expertise. DSEAR All 3 families of gases.
Evidence	labelled line diagram of a gas system or a sketch of relevant gas equipment; list of the main components; Details of interactions with this gas system; full CV.	labelled line diagram of a gas system or a sketch of relevant gas equipment; list of the main components; Details of interactions with this gas system; log sheets, full CV.	labelled line diagram of a gas system; list of the main components; Details of interactions with this gas system; log sheets, full CV.	labelled line diagram of a gas system; list of the main components; Details of interactions with this gas system; Log book; full CV.	Project files; Risk assessments; Log book; Full CV.

\* - Industry standard relevant training at discretion of CEA or the Training Provider. Inadequate prior knowledge may result in the candidate having difficulty during assessment.

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Documents required for study	NICEIC Non-Domestic gas Safety On-Site guide parts 1 & 2	NICEIC Non-Domestic gas Safety On-Site guide parts 1 & 2 Handouts provided by training provider.	NICEIC Non-Domestic gas Safety On-Site guide parts 1 & 2 Handouts provided by training provider.	UP 1 – test & purge UP 2 - pipework UP 4 - commissioning UP 6 – boosters & compressors UP 10 - flues	Add UP 16 - DSEAR IGEM SR25 - Zoning And possibly UP 3 – engines UP 9 – GTs UP 12 – process plant
Legislation required for study	GSIUR HSE L56	GSIUR HSE L56	GSIUR/L56 MCPD CAA/EPR	GSIUR/L56 PSSR RIDDOR DSEAR MCPD/EPR	GSIUR/L56 Gas Safety (Management) Regulations 1996 PSSR RIDDOR DSEAR/ATEX CDM
Training material	As study documents	As study documents. Bespoke material as necessary UP 1 – test & purge, UP 2 – pipework, BS 6644 (boilers), BS 6896 (radiant heaters), BS EN 751 (joints)	As study documents. Bespoke material as necessary i.e. BS 7967 (analysers), UP 1 – test & purge, UP 2 – pipework, UP 6 – boosters & compressors, UP 10 - flues	BS and UP standards and legislation. e.g. BS EN 15001 UKLPG CoP Bespoke material as necessary	BS and UP standards and legislation. Bespoke material as necessary
Exams	multiple choice questions	Written questions and multiple choice questions	Written questions and multiple choice questions	Written questions 'table top' exercises	Written questions 'table top' exercises
Course length, incl. practicals	Home study – allow up to 40 hours over a 4 week period incl. exam	Total 5 days including practical assessments. 8 candidates per course	Total 5 days including practical assessments. 8 candidates per course	Total 4 days including assessments. 8 candidates per course	5 days spread over a few weeks. 8 candidates per course
Practical assessments during course	None	2 days including purging and re-lighting, strength testing, leak testing and proving disconnected equipment works correctly.	2 days including combustion analysis and emissions measurements, purging and strength testing.	Pipe sizing exercises. Strength testing exercises	DSEAR and Risk Assessment exercises. Project work