

CORE OBJECTIVES (GAS)

1	Broad Coverage (For all Streams)	Code	ES Initials & Date of Assessment			
			G	K	E	C
<p>To provide training and experience in which the trainees can learn and have a broad base related to:-</p>						
1.1	Gas Production Processes	E/K*				
1.2	Gas analysis techniques	E/K*				
1.3	Gas quality testing and control	E				
1.4	Design of supply systems	E				
1.5	Installation, testing and commissioning of transmission, distribution, service and installation pipes	E				
1.6	Gas pressure control systems installation, testing and commissioning	E				
1.7	Gas properties and combustion characteristics	E				
1.8	Gas measurement and metering systems	E				
1.9	Gas legislation, regulations, codes of practice and safety procedures	E				
1.10	Risk and environmental assessments	E				
1.11	Good understanding of quality customer service	E				
1.12	Basic knowledge of gas applications	E				
1.13	Project Planning and management	C				
<p><i>*As appropriate to the company</i></p>						

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2	Specific Coverage	Code	ES Initials & Date of Assessment			
			G	K	E	C
To provide specific training experiences in any one or more of the following 3 streams in Gas Engineering :						
- Gas Production Engineering						
- Gas Transmission and/or Distribution Engineering						
- Gas Utilization Engineering						
2.1	Gas Production Engineering Stream					
	- Gas plants siting and layouts proposals	C				
	- Gas plant design, construction, testing and commissioning	C				
	- Gas plants operation and maintenance	C				
	- Gas production processes	C				
	- Gas quality testing and control	C				
	- Control and instrumentation for plants	C				
	- Electrical supply systems for plants	C				
	- Plant protection systems and testing	C				
	- Plant safety management and environmental management systems	C				

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2	Specific Coverage	Code	ES Initials & Date of Assessment			
			G	K	E	C
2.2	<p>Gas Transmission and/or Distribution Engineering Stream</p> <ul style="list-style-type: none"> - Network design - Installation, testing, commissioning, operation, maintenance and control of transmission and/or distribution system - Design, installation, testing and commissioning and maintenance of pressure control system - Knowledge, application and upkeeping of Supervisory Control and Data Acquisition (SCADA) System - Knowledge, application and upkeeping of pipeline automated mapping/facilities management system - Gas measurement and metering systems design, installation and maintenance - Siting and layout proposals of Pressure Reduction Station and Pigging Station - Design, construction, testing, commissioning and operation of Pressure Reduction Station and Pigging Station - Gas leakage survey, repairs and maintenance of pipelines - Emergency handling and crisis management - Design, construction and testing of pressure vessel for local distribution - Design, construction and testing of gas transportation vehicles - Handling and transportation of compressed gases and liquified gases - Siting and layout proposals of storage/distribution systems of liquified gases - Design, construction, testing, commissioning and operation of storage/distribution systems of liquified gases 	<p style="text-align: center;">C</p> <p style="text-align: center;">C</p> <p style="text-align: center;">C</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C</p> <p style="text-align: center;">C</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p> <p style="text-align: center;">C**</p>				
<p>** Only applicable to companies with the type of specific operation</p>						

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2 Specific Coverage	Code	ES initials and Date of Assessment			
		G	K	E	C
2.3 Gas Utilisation Engineering Stream <ul style="list-style-type: none"> - Gas appliances design, application and testing - Gas equipment and control system design, construction and testing - Installation, commissioning and testing of gas appliances, equipment and control systems - Gas flue systems design installation and testing - Gas measurement and metering system design and installation - Appliance and control system, fault diagnosis, repair and maintenance - Emergency handling - Quality Customer Service 	 C C C C C C C C				