PELUANG UNTUK MENJADI
ORANG BERTANGGUNGJAWAB (OB) DAN ORANG KOMPETEN GAS

Dr. Mohd Dinie Muhaimin Samsudin

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UTM-MPRC Institute for Oil and Gas

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017-9722346

SEMINAR MEMPERTINGKATKAN KESELAMATAN ELEKTRIK & GAS SECARA BERKESAN 2019
28 Ogos 2019,
Hotel Grand Riverview, Kota Bharu, Kelantan

KeTTHA KEMENTERIAN TENAGA, TEKNOLOGI HIJAU DAN AIR
Energy Industry Award 2011

STANDARDS MALAYSIA ACCREDITED LABORATORY
MS ISO/IEC 17025

K·I·A 2013
Training Institution Excellence Award (Gas)

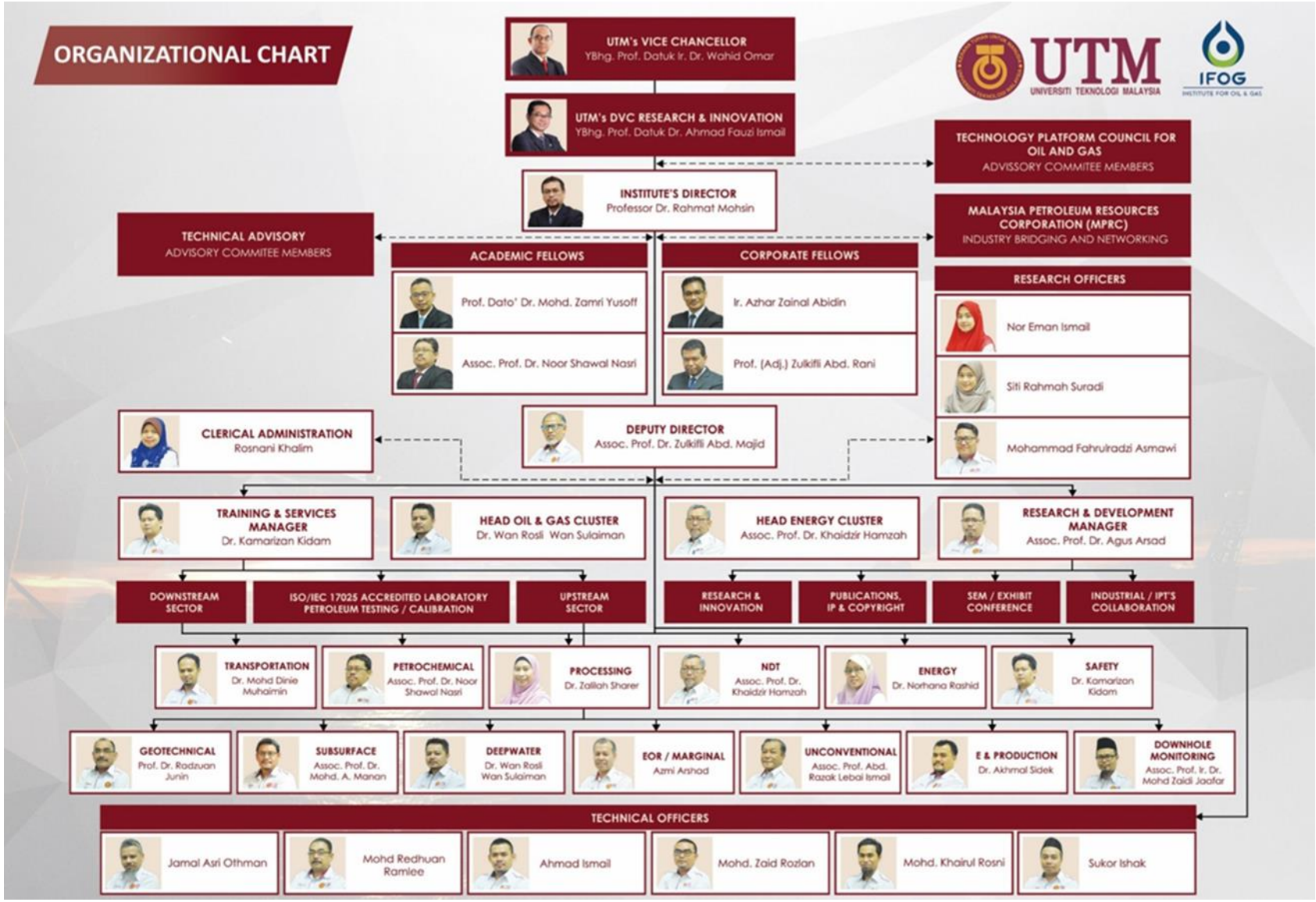
Universiti Teknologi Malaysia (UTM) – In Brief

UTM Johor Bahru

UTM Kuala Lumpur

*Sept 2018 (Headcount)

UTM-MPRC Institute for Oil and Gas



UTM-MPRC IFOG's Vision

" A global knowledge-based centre of reference for oil, gas and energy industry "

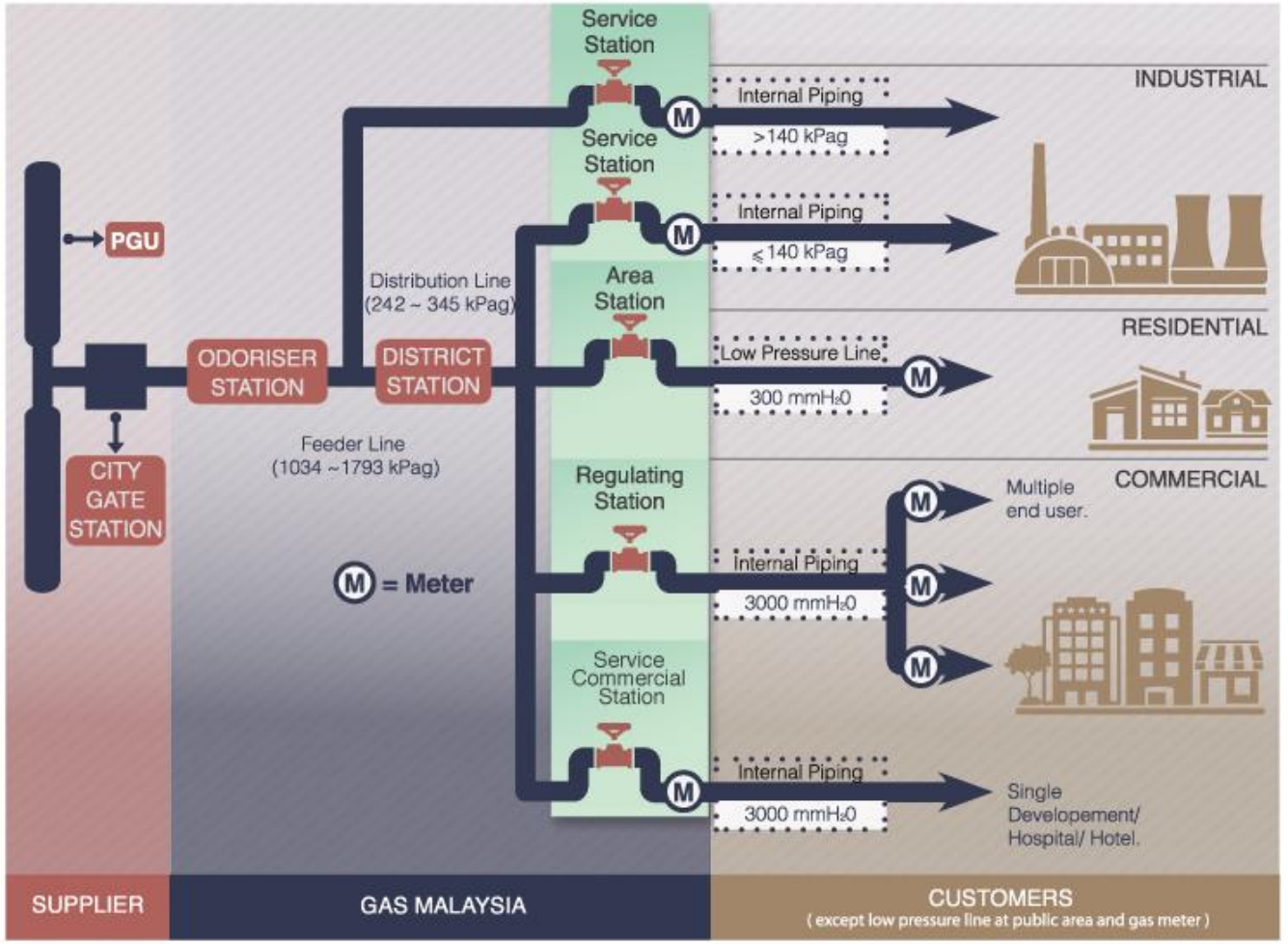
UTM-MPRC IFOG's Mission

" To provide comprehensive platform in the professional training, accredited laboratory services, consultancy, product development, information dissemination and R & D for the development of the oil, gas and energy industry "

UTM-MPRC IFOG's Objective

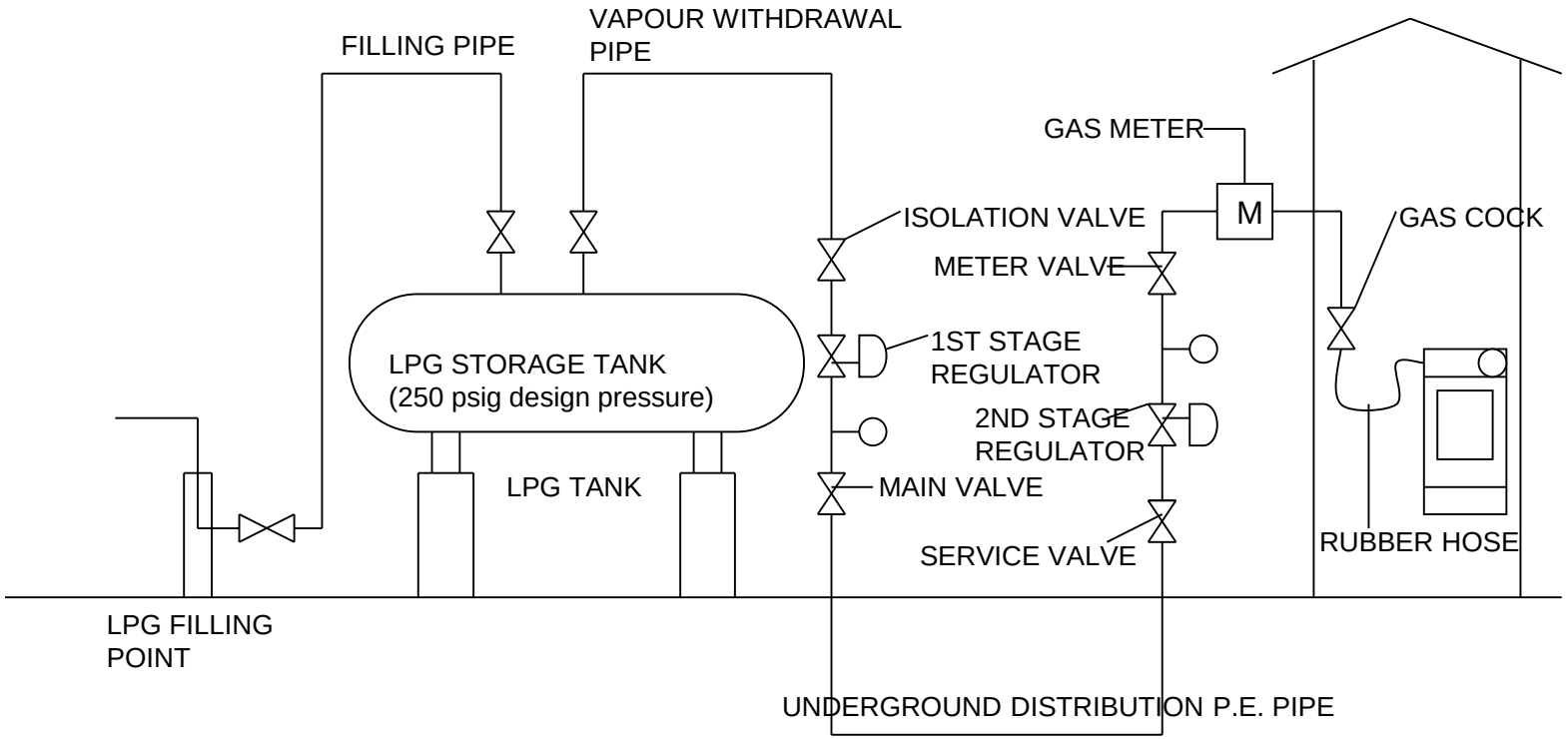
" To emerge as a progressive global hub in the manpower training programme, innovative research, product development and centre of referencing in the oil, gas and energy industry by inculcating its culture of excellence "

Natural Gas Supply Concept

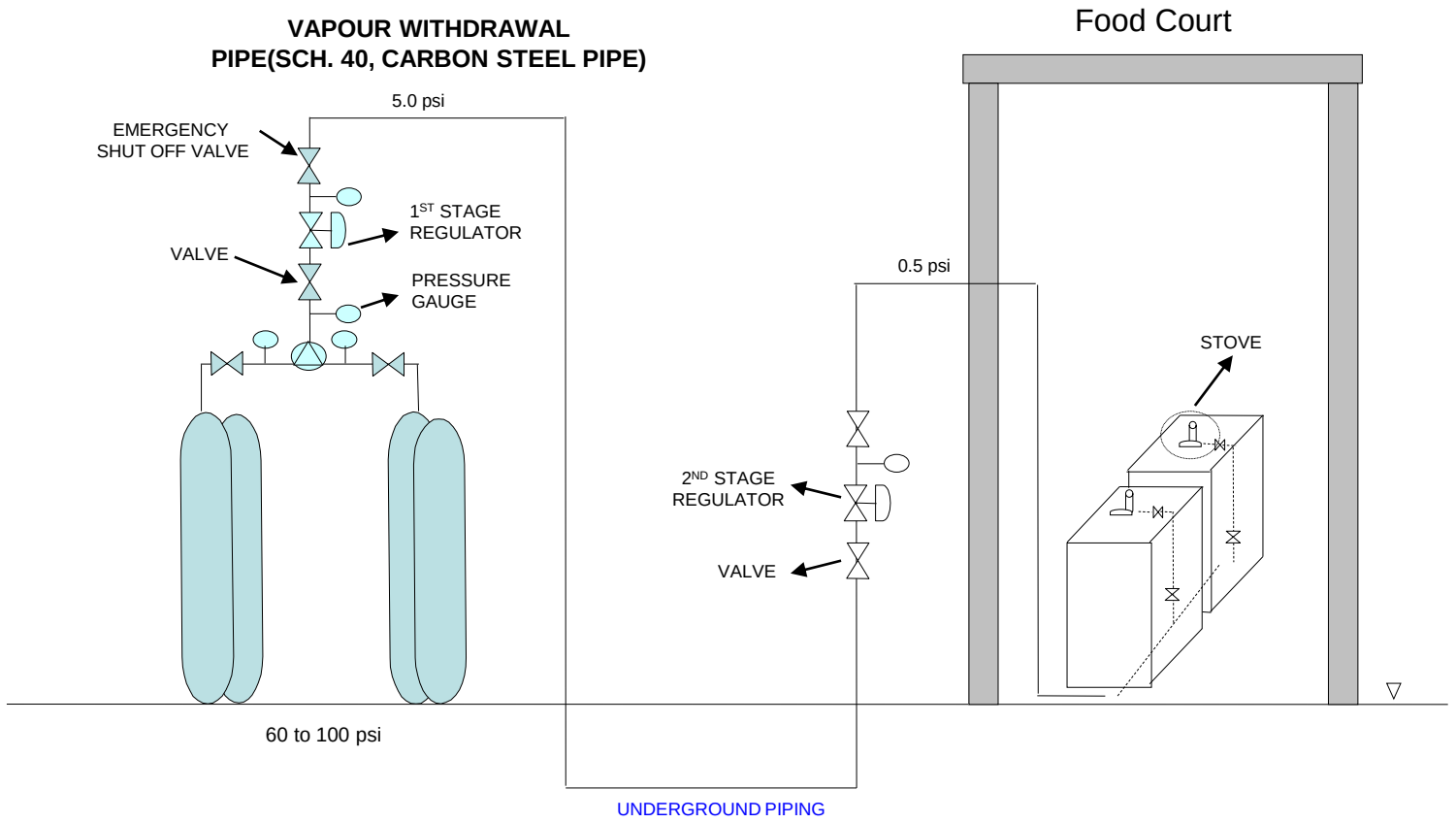


Liquefied Petroleum Gas (LPG) Supply Concept

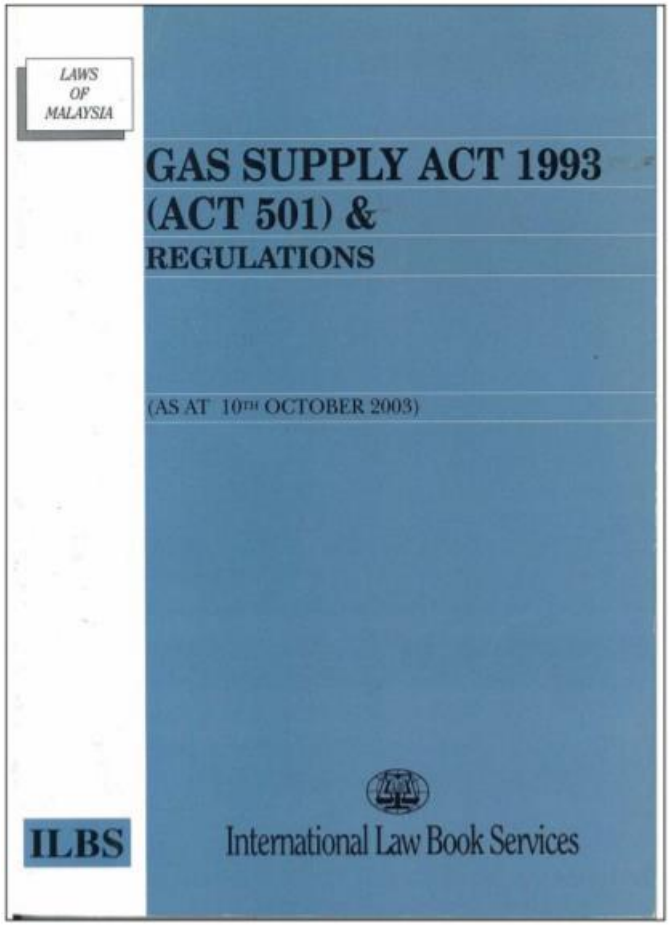
LPG Bulk Storage System

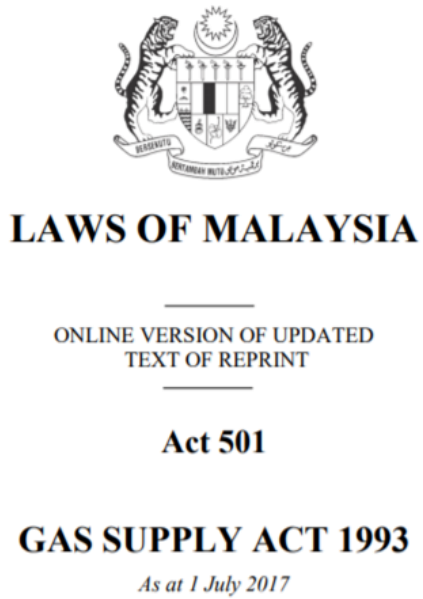


LPG Manifold Storage System



Act and Regulations





Classification of Gas Installation (Natural Gas)

1.	Class I	*Natural Gas* Installation with maximum operating pressure exceeding 60 psig
2.	Class II	*Natural Gas* Installation with maximum operating pressure exceeding 5 psig but not exceeding 60 psig.
3.	Class III	*Natural Gas* Installation with maximum operating pressure not exceeding 5 psig.

Classification of Gas Installation (LPG)

1.	Class I	*Liquefied Petroleum Gas* Installation with bulk storage exceeding 10 kl aggregate water capacity; and pipeline with maximum operating pressure exceeding 20 psig after first stage regulator.
2.	Class II	*Liquefied Petroleum Gas* Installation with bulk storage exceeding 10 kl aggregate water capacity; or Installation with manifolded cylinders exceeding 2.5 kl aggregate water capacity (vapour withdrawal or liquid withdrawal with vapourizer); and pipeline with maximum operating pressure exceeding 5 psig but not exceeding 20 psig after first stage regulator.
3.	Class III	*Liquefied Petroleum Gas* Installation with manifolded cylinders not exceeding 2.5 kl aggregate water capacity (vapour withdrawal only); and pipeline with maximum operating pressure exceeding 5 psig after first stage regulator.

Scope of Work of Various Classes of Competent Person

No.	*Competent Person*	*Endorsement of Plan*	*Endorsement of Certificate of Completion*	*Endorsement of Test Certificate*	*Repair of gas installation*	*Maintenance of gas installation*
1.	Gas Engineer	All Classes of gas installation	All Classes of gas installation	All Classes of gas installation	All Classes of gas installation	All Classes of gas installation
2.	Gas Engineering Supervisor	Class II and Class III gas installation	All Classes of gas installation	All Classes of gas installation	All Classes of gas installation	All Classes of gas installation
3.	Gas Fitter					
	(a) Class I	Class III gas installation	Class II and Class III gas installation	Class II and Class III gas installation	Class II and Class III gas installation	Class II and Class III gas installation
	(b) Class II	Class III gas installation	Class III gas installation	Class III gas installation	Class III gas installation	Class III gas installation
	(c) Class III		Class III gas installation (repair work only)	Class III gas installation (repair work only)	Class III gas installation	Class III gas installation

How to Become a Competent Person?

Competent Person	Academic requirement	Working experience in gas pipeline work or gas installation
Gas Engineer	Professional engineer registered with Board of Engineer Malaysia	2 years
Gas Engineering Supervisor	Bachelor of Engineering or Diploma of Engineering	2 years
Gas Fitter I	Any related academic qualification	1 year as Gas Fitter II
Gas Fitter II	Any related academic qualification	2 years as Gas Fitter III
Gas Fitter III	Any related academic qualification	1 year

Before being certified as a competent person, candidates need to sit for a written competency examination and interview conducted by Energy Commission. However, candidates who pass gas engineering courses accredited by the Energy Commission.

UTM-MPRC IFOG Accredited from Energy Commission

JABATAN BEKALAN ELEKTRIK DAN GAS
MALAYSIA

PENTAULIAHAN SEBAGAI PUSAT LATIHAN
DAN PEPERIKSAAN

Institusi :

Pusat Teknologi Gas (Gasteg)
Fakulti Kejuruteraan Kimia dan Kejuruteraan Sumber Asli
Universiti Teknologi Malaysia
81310 Skudai
Johor

DENGAN INI KETUA PENGARAH BEKALAN GAS MALAYSIA MEMBERI PENTAULIAHAN KEPADA INSTITUSI DI ATAS SEBAGAI PUSAT LATIHAN DAN PEPERIKSAAN UNTUK :-

KURSUS : JURUTERA GAS

KATEGORI : JURUTERA GAS
PENYELIA KEJURUTERAAN GAS

SYARAT-SYARAT PENTAULIAHAN ADALAH SEPERTI DI LAMPIRAN A DAN TEMPOH PENGIKTIRAFAN BERMULA DARI TARIKH PERAKUAN PENGIKTIRAFAN INI DITANDATANGANI DAN AKAN TERBATAL JIKA PIHAK INSTITUSI MELANGGAR SYARAT-SYARAT YANG DITETAPKAN.

(Datuk Ir. Mohd. Annas bin Hj. Mohd. Nor)
Ketua Pengarah Bekalan Gas
Malaysia.

Tarikh : 4 Oktober 1999

JABATAN BEKALAN ELEKTRIK DAN GAS
MALAYSIA

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KURSUS : JURUGEGAS GAS

KATEGORI : JURUGEGAS GAS I
JURUGEGAS GAS II
JURUGEGAS GAS III

SYARAT-SYARAT PENTAULIAHAN ADALAH SEPERTI DI LAMPIRAN A DAN TEMPOH PENGIKTIRAFAN BERMULA DARI TARIKH PERAKUAN PENGIKTIRAFAN INI DITANDATANGANI DAN AKAN TERBATAL JIKA PIHAK INSTITUSI MELANGGAR SYARAT-SYARAT YANG DITETAPKAN.

(Datuk Ir. Mohd. Annas bin Hj. Mohd. Nor)
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Malaysia.

Tarikh : 4 Oktober 1999

Training Requirement for a Specific Competency

Competence Person	Training Requirement
Gas Engineers	Gas Distribution Course for Engineers *
Gas Engineering Supervisors	Gas Distribution Course for Engineers *
Gas Fitters	Gas Fitter Course (Class I, II and III) *
Gas Users (Private Gas Licensee)	Responsible Persons*

*** Courses accredited by Jabatan Gas, Suruhanjaya Tenaga**

Course for Engineers and Gas Engineering Supervisors

- Entry requirement:
  - Diploma or Bachelors degree in any engineering discipline

- **Part 1:** 78 hours of lectures
- **Part 2:** 8 hours of site visits to gas pipeline construction/gas users
- **Part 3:** 12 hours of project design and implementation
  - To be submitted as part of the requirement for obtaining the certificate

- Total 98 hours of contact time

Course Module for Engineers and Gas Engineering Supervisors

Module 1: Gas Regulation, Standard and Piping System		
No.	**Course Name**	**Contact Hours**
1	Gas Industry Overview	6
2	Act and Standard	6
3	Material and Component	4
4	Pipe and Jointing	4
5	Corrosion	4

Module 2: Burner System and Combustion		
No.	**Course Name**	**Contact Hours**
1	Properties and Thermodynamics	6
2	Combustion, Burner Conversion, Venting System	6

Module 1: Gas Regulation, Standard and Piping System		
No.	**Course Name**	**Contact Hours**
1	Testing & Commissioning	6
2	Operation and Maintenance LPG	4
3	Operation and Maintenance NG	4
4	Site Visit	8

Module 4: Gas Networking and Storage System		
No.	**Course Name**	**Contact Hours**
1	Gas Metering	4
2	Pressure Regulation	4
3	Gas Networking	10
4	System Storage	10

Module 5: Project Design and Implementation		
No.	**Course Name**	**Contact Hours**
1	Project Implementation	4
2	Project Design Review	4
3	Design Guide and Workshop	4

Sample of Schedule (Gas Distribution Course for Engineers)

	Module	Date	Time	Instructor/Facilitator
	***Module 1*: Gas Regulation, Standard and Piping System**			
1 2 3	**Course Registration, Introduction to Course Structure & Exam Briefing** Gas Industry Overview	*23/02/2019 (Saturday)*	*1000 – 1300 (3h)* *1400 – 2000 (6h)*	Prof. Dr. Rahmat Mohsin (UTM) Assistant Secretariat Prof. Dr. Rahmat Mohsin (UTM)
4	**Module 2: Burner System and Combustion** Combustion, Burner Conversion, Venting System	*24/02/2019 (Sunday)*	*0900 – 1500 (6h)*	Assoc. Prof. Dr. Azeman Mustafa (UTM)
5	Act and Standard	*9/03/2019 (Saturday)*	*1400 – 2000 (6h)*	Ir. Mohd Helmi Mohd Zaihan (ST)
6 7	Material and Component Pipe and Jointing	*10/03/2019 (Sunday)*	*0900 – 1300 (4h)* *1400 – 1800 (4h)*	En. Zulkifli Hamzah (Gas Malaysia Berhad) En. Zulkifli Hamzah (Gas Malaysia Berhad)
8	Corrosion	*23/03/2019 (Saturday)*	*1400 – 1800 (4h)*	En. Mokhtar Mohd Nor (ST)
	***Module 2*: Burner System and Combustion**			
9	Properties and Thermodynamics	*24/03/2019 (Sunday)*	*0900 – 1500 (6h)*	Dr. Mohd Fadil Abd Wahab (UTM)
	***Module 3*: Gas Commissioning and Operation System**			
10	Testing & Commissioning	*6/04/2019 (Saturday)*	*1400 – 2000 (6h)*	En. Mokhtar Mohd Nor (ST)
11 12	Operation and Maintenance LPG Operation and Maintenance NG	*7/04/2019 (Sunday)*	*0900 – 1300 (4h)* *1400 – 1800 (4h)*	En. Zainal Zakariah (Gas Supply) En. Bahari Baharom (Gas Malaysia Berhad)
	***Module 4*: Gas Networking and Storage System**			
13 14	Gas Metering Pressure Regulation	*13/04/2019 (Saturday)*	*0900 – 1300 (4h)* *1400 – 1800 (4h)*	En. Syahrul Abd. Manap (SIRIM) En. Bahari Baharom (Gas Malaysia Berhad)
15	Gas Networking	*14/04/2019 (Sunday)*	*0900 – 1300 (4h)* *1400 – 2000 (6h)*	Dr. Mohd Dinie Muhaimin Samsudin (UTM)
16	**Site Visit ****	*20/04/2019 (Saturday)*	*0900 -1500 (6h)*	En. Jamal Asri Othman (UTM)
17	System Storage	*21/04/2019 (Sunday)*	*0900 – 2000 (10h)*	Prof. Dr. Rahmat Mohsin (UTM)
	***Module 5*: Project Design and Implementation**			
18	Project Implementation	*4/05/2019 (Saturday)*	*1400 – 1800 (4h)*	TBA
19	Design Guide and Workshop	*5/05/2019 (Sunday)*	*0900 – 1300 (4h)* *1400 – 1800 (4h)*	Prof. Dr. Rahmat Mohsin (UTM)
20 21	**EXAM PAPER I** **EXAM PAPER II**	*18/05/2019 (Saturday)*	*0900 – 1200 (3h)* *1400 – 1700 (3h)*	Prof. Dr. Rahmat Mohsin (UTM) Assistant Secretariat (UTM)
22 23	**EXAM PAPER III** **EXAM PAPER IV**	*19/05/2019 (Sunday)*	*0900 – 1200 (3h)* *1400 – 1700 (3h)*	Prof. Dr. Rahmat Mohsin (UTM) Assistant Secretariat (UTM)
24	Submit Project Report (UTM, JOHOR BAHRU)	*31/05/2019 (Saturday)*		Prof. Dr. Rahmat Mohsin (UTM)

Course for Gas Fitter Class I

- Entry Requirement: SPM and MCE and must posses Fitter Class II certification
- Evaluation: 80 % attendance and sit for tests
- Duration: Approximately 4 months, classes conducted during weekends on Saturdays and Sundays
- Purpose: To prepare Gas Fitter Class I candidates for competency oral examination with ST

Course Module for Gas Fitter Class I

1. Fuel Properties, Basic Piping and Safety
2. Pipe Sizing II
3. LPG Storage System II
4. Welding II
5. Codes & Standards in Gas Industry
6. Gas Act and Regulations

Sample of Schedule (Gas Fitter Class I)

Modul		Tarikh	Masa	Penceramah
Modul	Pendaftaran dan Taklimat Kursus	Sabtu	1000 – 1300	Uruesetia Kursus Pembantu Urusetia
GF1-01	Sifat-Sifat Bahan Api Gas Asas Perpaipan Bahan Api Gas dan Aspek Keselamatan	Sabtu	1400 – 2000	Dr. Zulkifli Abdul Majid (UTM, SKUDAI)
GF1-02	Pensaizan Paip II	Ahad	0900 – 1300 1400 - 1800	Dr. Dinie Muhaimin (UTM, SKUDAI)
GF1-03	Sistem Storan GPC II	Sabtu	1400 – 2000	Prof. Dr. Rahmat Mohsin (UTM, SKUDAI)
GF1-04	Kimpalan II	Ahad	0900 – 1300 1400 - 1600	Dato' Ghazali Md Rakim JM Consultant (KL)
GF1-05	Malaysian Codes MS830 and MS930	Sabtu	1400 – 2000	Suruhanjaya Tenaga (PUTRAJAYA)
GF1-06	Gas Act and Regulations	Ahad	0900 – 1300 1400 - 1600	Suruhanjaya Tenaga (PUTRAJAYA)
	Taklimat Peperiksaan dan Ulangkaji	Jumaat	1600-2000	Urusetia Kursus
	Peperiksaan Akhir Kursus Jurugegas Kelas I	Sabtu Sabtu Ahad	Kertas I: 10.00 – 12.00 tghari (2 jam) Kertas II: 2.00 – 4.00 ptg (2 jam) Kertas III: 9.00– 1.00 ptg (4 jam)	Urusetia Kursus Suruhanjaya Tenaga

Course for Gas Fitter Class II

- Entry Requirement: SPM and MCE and must posses Fitter Class III certification
- Evaluation: 80 % attendance and sit for tests
- Duration: Approximately 4 months, classes conducted during weekends on Saturdays and Sundays
- Purpose: To prepare Gas Fitter Class II candidates for competency oral examination with ST

Course Module for Gas Fitter Class II

1. Piping System for NG and LPG
2. LPG Storage System I
3. Pipe Sizing I
4. Meter & Regulator Sizing
5. Service and Maintenance
6. Testing, Purging and Commissioning
7. Combustion Process I
8. Gas Burners System I
9. Venting System I
10. Control System I
11. Welding I
12. Project Management I
13. Codes & Standards in Gas Industry
14. Gas Act and Regulations

Sample of Schedule (Gas Fitter Class II)

Modul		Tarikh	Masa	Penceramah
Modul	**Pendaftaran dan Taklimat Kursus**	***22/06/2019* (Sabtu)**	**1000 – 1300 (3 jam)**	**Uruesetia Kursus Pembantu Urusetia**
GF2-01	Sifat-Sifat Bahan Api Gas Asas Perpaipan Bahan Api Gas	*22/06/2019* (Sabtu)	1400 – 2000 (6 jam)	Dr. Zulkifli Abdul Majid (UTM, SKUDAI)
GF2-04	Pensaizan Paip 1	*23/06/2019* (Ahad)	0900 – 1300 (4 jam)	En. Jamal Asri Othman (UTM, SKUDAI)
GF2-02	Sistem Storan GPC	*6/07/2019* (Sabtu)	1400-2000 (6 jam)	Prof. Dr. Rahmat Mohsin (UTM, SKUDAI) URUSETIA 1
GF3-03	Pemilihan Meter dan Pengatur Tekanan	*7/07/2019* (Ahad)	0900-1600 (6 jam)	Prof. Dr. Rahmat Mohsin (UTM, SKUDAI)
GF2-08	Sistem Penunu Gas	*20/07/2019* (Sabtu)	1400 – 1800 (4 jam)	Prof. Madya Dr. Azeman (UTM, SKUDAI)
GF2-06	Penyelenggaraan Sistem Perpaipan Bahan Api Gas	*21/07/2019* (Ahad)	0900 – 1600 (6 jam)	En. Zainal Zakariah (Gas Supply, Melaka) URUSETIA 2
	Ujian kefahaman I (Modul GF2-01, 02 dan 03	***21/07/2019* (Ahad)**	**1600-1800 (2 jam)**	**Urusetia Kursus**
GF2-11	Kimpalan	*3/08/2019* (Sabtu)	1400-1800 (4 jam)	Dato' Ghazali Md Rakim JM Consultant (KL)
	Ujian kefahaman II (Modul GF2-04, 06 dan 08)	***3/08/2019* (Sabtu)**	**1800 – 2000 (2 jam)**	**Urusetia Kursus**
GF2-10	Sistem Kawalan	*4/08/2019* (Ahad)	0900 – 1300 (4 jam)	En Jamal Asri Othman (UTM, SKUDAI)
GF2-09	Sistem Pengudaraan	*4/08/2019* (Ahad)	1400-1800 (4 jam)	Dr. Dinie Muhaimin (UTM, SKUDAI) URUSETIA 3
GF2-12	Pengurusan Projek	*17/08/2019* (Sabtu)	1400-1800 (4 jam)	Dr. Zulkifli Abdul Majid (UTM, Skudai)
	Ujian kefahaman III (Modul GF2-09, 10, 11 dan 12)	***17/08/2019* (Sabtu)**	**1800 – 2000 (2 jam)**	**Urusetia Kursus**
GF2-05	Pengujian, Pembersihan & Ujilari Sistem Paip	*18/08/2019* (Ahad)	0900-1300 (4 jam)	En. Mokhtar Mohd Nor (Suruhanjaya Tenaga)
GF3-07	Proses Pembakaran	*18/08/2019* (Ahad)	1400-1600 (4 jam)	Dr. Zaliliah Sharer (UTM, SKUDAI)
	LAWATAN TAPAK	*7/09/2019* (Sabtu)	0900-1500	En Jamal Asri Othman (UTM, SKUDAI)
	Ujian Kefahaman V (Modul GF2-05 dan 07)	***7/09/2019* (Ahad)**	**1600-1800 (2 jam)**	**Urusetia Kursus**
GF2-13	Malaysian Codes MS830 and MS930	*8/09/2019* (Ahad)	0900-1300 (4 jam)	Suruhanjaya Tenaga (PUTRAJAYA)
GF2-14	Gas Act and Regulations	*8/09/2019* (Ahad)	1400-1800 (4 jam)	Suruhanjaya Tenaga (PUTRAJAYA)
	Taklimat Peperiksaan dan Ulangkaji	*20/09/2019* (Jumaat)	1500-2000 (5 jam)	Urusetia Kursus
	Peperiksaan Akhir Kursus Jurugegas Kelas II	***21/09/2019* (Sabtu) *21/09/2019* (Sabtu) *22/09/2019* (Ahad)**	**Kertas I: 10.00 – 12.00 tghari (3 jam) Kertas II: 2.00 – 4.00 ptg (2 jam) Kertas III: 9.00– 12.00 tghari (3 jam)**	**Urusetia Kursus Suruhanjaya Tenaga**

Course for Gas Fitter Class III

- Entry Requirement: SPM/MCE
- Evaluation: 80 % attendance and sit for tests
- Duration: Approximately 3 months, classes conducted during weekends on Saturdays and Sundays
- Purpose: To prepare Gas Fitter Class III candidates for competency oral examination with ST

Course Module for Gas Fitter Class III

1. Properties of Fuel Gases
2. Basic Piping System
3. Testing, Purging and Commissioning
4. Service and Maintenance
5. Codes & Standards in Gas Industry
6. Gas Supply Act & Gas Supply Regulations

Sample of Schedule (Gas Fitter Class III)

Modul		Tarikh	Masa	Penceramah
Modul	Pendaftaran dan Taklimat Kursus	Sabtu	1000 – 1300	Uruesetia Kursus Pembantu Urusetia
GF3-01	Sifat-Sifat Bahan Api Gas	Sabtu	1400 – 2000	Dr. Zulkifli Abdul Majid (UTM, SKUDAI)
GF3-02	Asas Perpaipan Gas Bahan Api	Ahad	0900 – 1300 1400 - 1600	Dr. Dinie Muhaimain (UTM, SKUDAI)
GF3-03	Pengujian, Pembersihan dan 'commisioning'	Sabtu	1400 – 2000	Suruhanjaya Tenaga
GF3-04	Pemeriksaan dan penyelenggaraan Sistem Paip Gas Bahan Api	Ahad	0900 – 1300 1400 - 1600	Syarikat Kontraktor Gas
GF3-05	Malaysian Codes MS830 and MS930	Sabtu	1400 – 2000	Suruhanjaya Tenaga (PUTRAJAYA)
GF3-06	Gas Act and Regulations	Ahad	0900 – 1300	Suruhanjaya Tenaga (PUTRAJAYA)
	Taklimat Peperiksaan dan Ulangkaji	Jumaat	1600-2000	Urusetia Kursus
	Peperiksaan Akhir Kursus Jurugegas Kelas I	Sabtu	Kertas I: 10.00 – 12.00 tghari (2 jam) Kertas II: 2.00 – 4.00 ptg (2 jam)	Urusetia Kursus Suruhanjaya Tenaga
	Sesi Makmal (Pemasangan Paip Gas)	Ahad	0800 - 1800	Dr. Dinie Muhaimin Juruteknik Makmal

Gas Consumer

Shopping Malls / Food Courts

[Source : http://www.12e.my]

[Source : http://kbmall.com.my/]

Hotels / Restaurants

[Source : http://Booking.com]

[Source : https://www.facebook.com/KelantanResidents]

Hospitals

[Source : https://review.ibanding.com]

[Source : https://www.kpjperdana.com/]

Universities / Schools

[Source : https://pekhabar.com]

[Source : https://aunilieyana.blogspot.com]

https://www.nst.com.my/news/2017/02/211009/exploding-boiler-rocks-condo

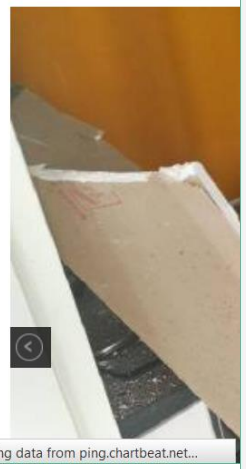
NEW STRAITS TIMES

Exploding boiler rocks condominium unit in Mont Kiara, expat escapes unscathed

www.theedgemarkets.com/article/empire-mall-explosion-linked-gas-leak-lower-g

Empire mall explosion linked to gas leak at lower ground floor

The Editor / TheEdge
September 30, 2011 13:51 pm



www.thestar.com.my/news/nation/2009/12/17/jusco-gas-explosion-contractors-c

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Star ONLINE

Jusco gas explosion: Contractors, consultants suspended (Update)

NATION

Thursday, 17 Dec 200912:00 AM MYT

By **Martin Carvalho** and **Allison Lai**

KUALA LUMPUR: Th
Shopping Gallery in
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A statement issued b
said the actual cause
official result was ex
The statement quoti
from its investigatio
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conducted in July th
Empire Shopping Ga
gas piping system is

MALACCA: The contractors and cor
Bachang here have been suspended

The order came as initial findings fro
centralised gas system as being the c
and injured 20 others.

State Fire and Rescue Department d
department's investigations into the
within two weeks.

"The main cause of the explosion wa
small fire following the explosion," he

https://www.nst.com.my/news/2016/04/137435/eight-injured-mid-valley-meg

NEW STRAITS TIMES

Eight injured in Mid Valley Megamall restaurant explosion [VIDEO]

www.thestar.com.my/news/nation/2011/05/09/briton-hurt-in-gas-leak-explosion/

Our Sites More

Star ONLINE

Briton hurt in gas leak explosion

NATION

Monday, 9 May 201112:00 AM MYT

Who is a responsible person

In relation to any premises, means the licensee or consumer, or an occupier of the premises, or where there is no consumer or occupier, the owner of the premises or any person authorized by the consumer or occupier to be **in charge of the gas pipeline or gas installation in the premises**.

[Definition from Gas Supply Regulation 1997]

Who Should be Appointed as the Responsible Person?

- Technicians
- Gas installation operators
- Maintenance personnel
- Building owners
- Consumers
- Occupiers
- Any person authorised by the consumer or occupier
- Licensee of Private Gas Licence

Responsibilities of Responsible Person

- Ensure installation is maintained in good and efficient working order (Regulation????).
- Ensure safety measures are observed during operation and maintenance work.
- Ensure pipeline can always be identified.
- Ensure gas shut off when gas leak or escape.
- Ensure gas is re-supplied safely after shut-off.
- Keep maintenance record.
- Attend and assist regulatory inspections.
- Implement repairs or alterations as advised by competent person.

Required Knowledge to Become Responsible Person

Module	Knowledge	Targeted Task (According to Gas Supply Regulation)

Fuel Properties	• Fuel Composition
	• Fuel Characteristics
	  • Density
	  • Specific Gravity
	  • Energy Content
	  • Expansion Factor
	  • Boiling Point
	  • Combustion
		Regulation 64(1)
		Regulation 63(2)
		Regulation 64(1)

Basic Piping System	• Piping Configuration • Piping Materials • System Components • System Operations • Piping Installation • Gas Metering and Pressure Control • Valve location • Materials Selection	Regulation 62(2) Regulation 64(1) Regulation 63(2) Regulation 128(2) Regulation 131(2) Regulation 134

Required Knowledge

Module	Knowledge	Targeted Task (According to Gas Supply Regulation)

Gas Supply 1993
Gas Supply Regulation 1997
	• Scope of Gas Supply Act 1993
	• Scope of Gas Supply Regulation 1993
	• Scope of Competence Persons
	  • Gas Engineer
	  • Gas Engineering Supervisor
	  • Gas Fitter I
	  • Gas Fitter II
	  • Gas Fitter III
	  • Responsible Person
	  • etc
		Regulation 62(2)
		Regulation 63(1)
		Regulation 63(2)
		Regulation 64(1)
		Regulation 128(2)
		Regulation 129(2)
		Regulation 131(2)
		Regulation 134
		Regulation 135
		Regulation 137(2)

Safety Aspect related to testing and Commissioning of Piping System	- Gas Properties - LPG Storage Safety - LPG Delivery Precodures - Safety Inspection Checklist - Emergency Response - Gas Leakage/fire - Gas Explosion	Regulation 62(2) Regulation 63(1) Regulation 63(2) Regulation 64(1) Regulation 128(2) Regulation 129(2) Regulation 131(2) Regulation 134 Regulation 137(2)

Required Knowledge

Module	Knowledge	Targeted Task (According to Gas Supply Regulation)
Inspection and Maintenance (Storage & Piping System)	- Scope of Maintenance - Maintaining LPG Storage System - Maintaining LPG Piping System - Maintaining NG Piping System - Safety Aspect	Regulation 62(2) Regulation 63(1) Regulation 63(2) Regulation 64(1) Regulation 128(2) Regulation 131(2) Regulation 134 Regulation 135 Regulation 137(2)
Site Visit System Trouble Shooting	- Gas Properties - LPG Storage Safety - LPG Delivery Procedures - Safety Inspection Checklist - Emergency Response - Gas Leakage/fire - Gas Explosion	Regulation 62(2) Regulation 63(1) Regulation 63(2) Regulation 64(1) Regulation 128(2) Regulation 129(2) Regulation 131(2) Regulation 134 Regulation 137(2)

Course Module for Responsible Person

1. Fuel Properties and Safety
2. Basic Piping System
3. Service and Maintenance
4. Safety Aspect and related issues
5. Gas Supply Act and Gas Supply Regulations
6. Site visit

Sample of Schedule (Responsible Person)

SELASA (23/01/2018)

8.30 am – 9.00 am	Pendaftaran dan taklimat ringkas
9.00 am – 10.30 am	Sifat-sifat Bahan Api Gas: Asal Usul dan Pencarigalian
10.30 am - 11.00 am	Rehat
11.00 am – 1.00 pm	Sifat-Sifat Bahan Api Gas: Gas Asli dan LPG Sistem paip LPG
1.00 pm – 2.00 pm	Rehat
2.00 pm – 4.00 pm	Sistem paip Gas Asli
4.00 pm – 4.30 pm	Rehat
4.30 pm – 6.00 pm	Sistem paip LPG

RABU (24/01/2018)

9.00 am – 10.30 am	Penyelenggaraan Sistem Perpaipan Bahan Api Gas
10.30 am – 11.00 am	Rehat
11.00 am – 1.00 pm	Penyelenggaraan Sistem Perpaipan Bahan Api Gas
1.00 pm – 2.00 pm	Rehat
2.00 pm – 4.00 pm	Aspek Keselamatan Sistem Perpaipan Bahan Api Gas
4.00 pm – 4.30 pm	Rehat
4.30 pm – 5.50 pm	Aspek Keselamatan Sistem Perpaipan Bahan Api Gas

KHAMIS (25/01/2018)

9.00 am – 10.30 am	Akta Bekalan Gas 1993
10.30 am – 11.00 am	Rehat
11.00 am – 1.00 pm	Peraturan-Peraturan Bekalan Gas 1997
1.00 pm – 2.00 pm	Rehat
2.00 pm – 5.00 pm	Lawatan ke tapak pepasangan/perpaipan Gas Pengenalpastikan sistem dan perbincangan
5.00 pm	Minum Petang & Bersurai

Any Enquiries

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