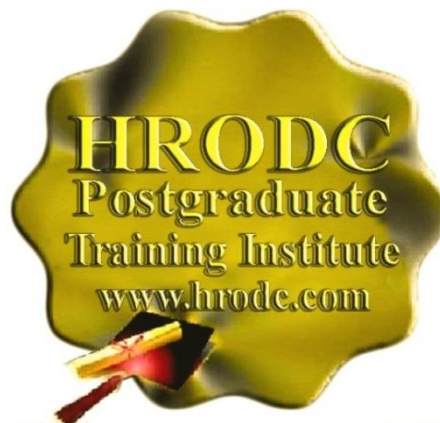


# HRODC Postgraduate Training Institute



#199.M16-19

**Petroleum – Oil and Gas –  
Pipeline Engineering  
Course or Seminar**

**Leading To:**


**DIPLOMA - POSTGRADUATE IN  
Petroleum – Oil and Gas – Pipeline  
Engineering (Quad Credit)**

**Accumulating to .**

**POSTGRADUATE DIPLOMA**

**Progressing To A Masters Degree –  
MBA – MSc – MA**



<b>Wolverhampton (HQ)</b>		<b>London Office</b>
122A Bhylls Lane, Wolverhampton, WV3 8DZ, United Kingdom Telephone: +44 (0) 1902 763 607 +44 (0) 1902 569133 Mobile: +44 (0) 7736 147507 E-mail: institute@hrodc.com Websites: (1) <a href="http://www.hrodc.com">http://www.hrodc.com</a> (2) <a href="http://hrodc-business-products-and-services.com">http://hrodc-business-products-and-services.com</a>		328 Linen Hall, 162-168 Regent Street, London. W1B 5TD, United Kingdom Telephone: +44 208 133 2760 Mobile: +44 (0) 7736 147507 E-mail: institute@hrodc.com Websites: (1) <a href="http://www.hrodc.com">http://www.hrodc.com</a> (2) <a href="http://hrodc-business-products-and-services.com">http://hrodc-business-products-and-services.com</a>
<b>HRODC Postgraduate Training Institute</b>		

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## HRODC Postgraduate Training Institute - UKRLP Registration



HRODC Postgraduate Training Institute is Registered with the UK Register of Learning Providers (UKRLP), of the Department for Business, Innovation and Skills (BIS), formerly Department of Innovation, Universities and Skills (DIUS).  
Its Registration Number is 10019585  
and can be verified at <http://www.ukrlp.co.uk/>

### Programme Co-ordinator:

**Prof. Dr. R. B. Crawford – Director HRODC Postgraduate Training Institute**

- PhD (University of London);
- MEd. M. (University of Bath);
- Adv. Dip. Ed. (University of Bristol);
- PGCIS (Thames Valley University);
- ITC (UWI);
- Member of the Standing Council of Organisational Symbolism (MSCOS);
- Member of the Asian Academy of Management (MAAM);
- Member of the International Society of Gesture Studies (MISGS);
- Member of the Academy of Management (MAOM);
- LESAN;
- Professor, HRODC Postgraduate Training Institute;
- Visiting Professor, Polytechnic University of the Philippines (PUP).

### For Whom This Programme is Designed

#### This Programme is Designed For:

- ✓ Pipeline designers, engineers and technicians
- ✓ Project, field, installation and operations managers
- ✓ Integrity and maintenance personnel



- ✓ Employees seeking career enhancement
- ✓ Professionals in supporting or aligned oil and gas sectors
- ✓ Oil and Gas Safety Officials
- ✓ Business Professionals
- ✓ Project Leaders
- ✓ Professional Staffs

**Duration: 4 Weeks (20 Days)**

**Cost:**

- ✓ **£16,000.00 Per Delegate for UK Delivery**
- ✓ **£20,000.00 Per Delegate for Delivery outside the UK**

**Please Note:**

- V.A.T. (Government Tax) does not apply to Corporate Sponsored Individuals taking courses in any location - within or outside the UK.
- It applies only to Individuals and Corporations based in the UK and to Non-UK Individual Residents taking courses in the UK.

**Cost includes:**

- Free Continuous snacks throughout the Event Days;
- Free Hot Lunch on Event Days;
- Free City Tour;
- Free Stationery;
- Free On-site Internet Access;
- Diploma – Postgraduate – in **Petroleum - Oil and Gas - Pipeline Engineering**; or
- Certificate of Attendance and Participation – if unsuccessful on resit.

**HRODC Postgraduate Training Institute's Complimentary Products include:**

1. HRODC Postgraduate Training Institute's **Leather Conference Folder**;
2. HRODC Postgraduate Training Institute's **Leather Conference Ring Binder/ Writing Pad**;
3. HRODC Postgraduate Training Institute's **Key Ring/ Chain**;

4. HRODC Postgraduate Training Institute's **Leather Conference (Computer – Phone) Bag** – Black or Brown;
5. HRODC Postgraduate Training Institute's **8GB USB Flash Memory Drive**, with Course Material;
6. HRODC Postgraduate Training Institute's **Metal Pen**;
7. HRODC Postgraduate Training Institute's **Polo Shirt**.

\*\*Please see product images, as a separate file - Complimentary Products For Students and Delegates, from HRODC Postgraduate Training Institute.\*\*

**Course runs from 9:30 to 4:30 pm.**

**Location: Central London and International Locations**

#### **Schedule - Part 4:**

[http://www.hrodc.com/Course Schedule Part 4 London Full Time Postgraduate Diploma MA MBA MSc Short Courses HRM Petroleum Oil Gas Accounting Business English Communication.htm](http://www.hrodc.com/Course%20Schedule%20Part%204%20London%20Full%20Time%20Postgraduate%20Diploma%20MA%20MBA%20MSc%20Short%20Courses%20HRM%20Petroleum%20Oil%20Gas%20Accounting%20Business%20English%20Communication.htm)

**Click to book this course:**

[http://www.hrodc.com/Course Booking Form London Dubai Kuala Lumpur Paris Johannesburg Cairo Jeddah Abu Dhabi Kuwait MBA MSc MA Course.htm](http://www.hrodc.com/Course%20Booking%20Form%20London%20Dubai%20Kuala%20Lumpur%20Paris%20Johannesburg%20Cairo%20Jeddah%20Abu%20Dhabi%20Kuwait%20MBA%20MSc%20MA%20Course.htm)

## **Course Programme for Petroleum - Oil and Gas - Pipeline Engineering Leading to Diploma-Postgraduate in Petroleum - Oil and Gas - Pipeline Engineering (Quad Credit)**

### **Course Contents, Concepts and Issues**

#### **Part 1: PIPE FLOWS**

##### **Pipelines**

- Definition and Scope
- Brief History of Pipelines
- Existing Major Pipelines

- Importance of Pipelines
- Freight (Solids) Transport by Pipelines
- Types of Pipelines
- Components of Pipelines
- Advantages of Pipelines
- References

### Single-Phase Incompressible Newtonian Fluid

- Flow Regimes
- Local Mean Velocity and Its Distribution (Velocity Profile)
- Flow Equations for One-Dimensional Analysis
- Hydraulic and Energy Grade Lines
- Cavitation in Pipeline Systems
- Pipe in Series and Parallel
- Interconnected Reservoirs
- Pipe Network
- Unsteady Flow in Pipe

### Single-Phase Compressible Flow in Pipe

- Flow Analysis for Ideal Gas
- Flow Analysis for Real (Non-Ideal) Gas
- Work, Energy and Power Required for Compression of Gas

### Non-Newtonian Fluids

- Classification of Non-Newtonian Fluids
- Rheological Properties and Laws of Non-Newtonian Fluids
- Non-Newtonian Pipe Flow: Laminar
- Non-Newtonian Pipe Flow: Turbulent

### Flow of Solid/Liquid Mixture in Pipe (Slurry Pipelines)

- Flow Regimes
- Pseudohomogenous Flow

- Heterogeneous Flow
- Intermediate Flow Regime
- Practical Considerations

## Flow of Solid/Air Mixture Through Pipe

- Types of Pneumatic Conveying
- Flow Characteristics
- System Layouts
- System Design
- Safety Considerations
- Analyses

## Capsule Pipelines

- Introduction and History
- Pneumatic Capsule Pipeline (PCP)
- Hydraulic Capsule Pipeline (HCP)
- Coal Log Pipeline (CLP)
- Conclusion

## Part 2: ENGINEERING CONSIDERATIONS

### Pipes, Fittings, Valves and Pressure Regulations

- Types of Pipes
- Pipe Designation
- Connections (Joints)
- Fittings
- Valves
- Pressure Relief Valves and Pressure Regulating Valves

### Pumps and Turbines

- Energy Conversions by Pumps and Turbines
- Types of Pumps and Turbines

- Pump Drivers
- Coupling Pumps to Drivers
- Pump Control, Operation, and Maintenance
- Pump Selection
- Compressors, Blowers, and Fans
- Turbines
- Dimensionless Parameters

### Instrumentation and Pigging

- Flow Meters
- Sensors and Equipment
- Pigs (Scrapers)

### Protection of Pipelines against Abrasion, Freezing and Corrosion

- Lining, Coating, and Wrapping
- Insulation, Tracing, Jacketing, and Electric Heating
- Protection against Corrosion

### Planning and Construction of Pipelines

- Procedures Involved in Planning and Construction of New Pipelines
- Measures to Allow Pipeline Expansion
- Bending of Pipe
- Connecting Pipes
- Boring and Tunnelling to Install Pipe-Trenchless Technologies
- Pipeline Construction in Marsh and Swamp
- Offshore Construction
- Cold-Region Construction

### Structural Design of Pipelines

- Load Considerations
- Performance Analysis and Design



## Pipeline Operations, Monitoring, Maintenance and Rehabilitation

- General Operation of Pipeline
- Automatic Control System
- Integrity Monitoring and Leak Detection
- Integrity Management Program
- Risk-Based Management
- Pipeline Maintenance

## Synopsis of Diploma – Postgraduate, Postgraduate Diploma and Postgraduate Degree Regulation

## Postgraduate Diploma and Diploma – Postgraduate: Their Distinction and Assessment Requirement

Delegates studying courses of 5-9 days duration, equivalent to 30-54 Credit Hours (direct lecturer contact), will, on successful assessment, lead to the Diploma – Postgraduate. This represents a single credit at Postgraduate Level. While 6-day and 7-day courses also lead to a Diploma – Postgraduate, they accumulate 36 and 42 Credit Hours, respectively. Delegates and students who fail to gain the required level of pass, at Postgraduate Level will receive a Certificate of Attendance and Participation. The Certificate of Attendance and Participation will not count, for cumulative purpose, towards the Postgraduate Diploma.

Courses carry varying credit values; some being double credit, triple credit, quad credit and 5-credit, etc. These, therefore, accumulate to a Postgraduate Diploma. As is explained, later, in this document, a Postgraduate Diploma is awarded to students and delegates who have achieved the minimum of 360 Credit Hours, within the required level of attainment.

Credit Value and Credit Hours examples of Diploma – Postgraduate Courses are as follows:

<b>Credit Value</b>	<b>Credit Hours</b>
<b>Single-Credit</b>	<b>30-36</b>
<b>Double-Credit</b>	<b>60-72</b>
<b>Triple-Credit</b>	<b>90-108</b>
<b>Quad-Credit</b>	<b>120-144</b>
<b>10-Credit (X36 Credit-Hours) to 12-Credit (X30 Credit-Hours)</b>	<b>360</b>

Other Credit Values are calculated proportionately.

Because of the intensive nature of our courses and programmes, assessment will largely be in-course, adopting differing formats. These assessment formats include, but not limited to, in-class tests, assignments, end of course examinations. Based on these assessments, successful candidates will receive the Diploma – Postgraduate, or Postgraduate Diploma, as appropriate.

In the case of Diploma – Postgraduate, a minimum of 70% overall pass is expected. In order to receive the Award of Postgraduate Diploma, candidate must have accumulated at least the required minimum ‘credit-hours’, with a pass (of 70% and above) in at least 70% of the courses taken.

Delegates and students who fail to achieve the requirement for Postgraduate Diploma, or Diploma - Postgraduate - will be given support for 2 re-submissions for each course. Those delegates who fail to achieve the assessment requirement for the Postgraduate Diploma or Diploma - Postgraduate - on 2 resubmissions, or those who elect not to receive them, will be awarded the Certificate of Attendance and Participation.

## **Diploma – Postgraduate, Postgraduate Diploma and Postgraduate Degree Application Requirements**

Applicants for Diploma – Postgraduate, Postgraduate Diploma and Postgraduate Degrees are required to submit the following documents:

- ✓ Completed Postgraduate Application Form, including a passport sized picture affixed to the form;
- ✓ A copy of Issue and Photo (bio data) page of the applicant's current valid passport or copy of his or her Photo-embedded National Identity Card;
- ✓ Copies of credentials mentioned in the application form.

## Admission and Enrolment Procedure

- ✓ On receipt of all the above documents we will make an assessment of the applicants' suitability for the Programme for which they have applied;
- ✓ If they are accepted on their Programme of choice, they will be notified accordingly and sent Admission Letters and Invoices;
- ✓ One week after the receipt of an applicant's payment or official payment notification, the relevant Programme Tutor will contact him or her, by e-mail or telephone, welcoming him or her to HRODC Postgraduate Training Institute;
- ✓ Non-European Students will be sent immigration documentation, incorporating a Visa Support Letter. This letter will bear the applicant's photograph and passport details;
- ✓ Applicants will be notified of the dates, location and venue of enrolment and orientation;
- ✓ Non-UK students will be sent general information about 'student life' in the UK and Accommodation details.

## Modes of Study for Postgraduate Diploma Courses

There are three delivery formats for Postgraduate Diploma Courses, as follows:

1. Intensive Full-time Mode (3 months);
2. Full-time Mode (6 month);
3. Video-Enhanced On-Line Mode.

Whichever study mode is selected, the aggregate of 360 Credit Hours must be achieved.

## Cumulative Postgraduate Diploma Courses

All short courses can accumulate to the required number of hours, for the Postgraduate Diploma, over a six-year period from the first registration and applies to both general and specialist groupings. In this regard, it is important to note that short courses vary in length, the minimum being 5 days (Diploma – Postgraduate) – equivalent to 30 Credit Hours, representing one credit. Twelve 5-day short courses, representing twelve credits or the equivalent of 360 Credit Hours are, therefore, required for the Award of Postgraduate Diploma.

A six-day course (Diploma – Postgraduate) is, therefore, equivalent to 36 hours Credit Hours, representing one credit. Therefore, ten short courses, of this duration, equates to the required 360 Credit Hours, qualifying for the Award of Postgraduate Diploma. While double-credit courses last between ten and fourteen days, triple-credit courses range from fifteen to nineteen days. Similarly, quad-credit courses are from sixteen to nineteen days. On this basis, the definitive calculation on the Award requirement is based on the number of hours studied (aggregate credit-value), rather than merely the number of credits achieved. This approach is particularly useful when a student or delegate studies a mixture of courses of different credit-values.

For those delegates choosing the accumulative route, it is advisable that at least two credits be attempted per year. This will ensure that the required number of credit hours for the Postgraduate diploma is achieved within the six-year time frame.

## Progression to Postgraduate Degree – MA, MBA, MSc

- ✓ On the successful completion of the *Postgraduate Diploma*, delegates may register for the Masters Degree, after their successful completion of Course #7: *Research Project: Design, Conduct & Report*.

- ✓ The Delegates' Degree Registration Category will be dictated by the courses or modules studied at Postgraduate Diploma Level. The categories relate to Master of Business Administration (MBA); Master of Arts (MA) Master of Science (MSc); Executive Master of Business Administration (Executive MBA). Additional details are provided in the document entitled: regulation For HRODC Postgraduate Training Institute Diploma – Postgraduate - Postgraduate Diploma and Masters Degree – MA, MBA, MSc.

## Terms and Conditions

HRODC Policy Terms and Conditions are Available for viewing at:

<http://www.hrodc.com/COSTS.htm>

Or Downloaded, at:

[http://www.hrodc.com/Brochure\\_Download\\_Centre.Company\\_Brochures\\_Seminar\\_Brochures\\_Seminar\\_Schedule.htm](http://www.hrodc.com/Brochure_Download_Centre.Company_Brochures_Seminar_Brochures_Seminar_Schedule.htm)

The submission of our application form or otherwise registration by of the submission of a course booking form or e-mail booking request is an attestation of the candidate's subscription to our Policy Terms and Conditions, which are legally binding.

**Prof. Dr. R. B. Crawford - Director HRODC Postgraduate Training Institute**