

HIRODC Postgraduate Training Institute



A Postgraduate - Only Institution



#175

Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling

Programme

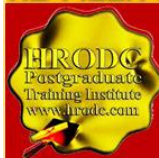
Leading To:

POSTGRADUATE DIPLOMA IN

Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

- Page 1 of 54

HIRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK



Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.



HRODC POSTGRADUATE TRAINING INSTITUTE
A Postgraduate – Only Institution

Websites:
<https://www.hrodc.com/>
<https://www.hrodc.london>
postgraduateshortcourses.com/

Email:
institute@hrodc.com
london@hrodc.com

HQ
122A Bhylls Lane
Wolverhampton
WV3 8DZ
West Midlands, UK

Tel:
+44 1902 763 607
+44 7736 147 507


HRODC Postgraduate Training Institute, A Postgraduate-Only Institution

Our UK Government's Verification and Registration

Our Institute is Verified by, and Registered with, the United Kingdom (UK) Register of Learning Providers (UKRLP), of the Department for Education (DfE). Its UK Provider Reference Number (UKPRN) is: 10019585 and might be located at: <https://www.ukrlp.co.uk/>.

Programme Coordinator:
Prof. Dr. R. B. Crawford is the Director of HRODC Postgraduate Training Institute, A Postgraduate-Only Institution. He has the following Qualifications and Affiliations:

- Doctor of Philosophy {(PhD) {University College London (UCL) - University of London}};
- MEd Management (University of Bath);
- Postgraduate (Advanced) Diploma Science Teacher Ed. (University of Bristol);
- Postgraduate Certificate in Information Systems (University of West London, formerly Thames Valley University);
- Diploma in Doctoral Research Supervision, (University of Wolverhampton);
- Teaching Certificate;



HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.

- Fellow of the Institute of Management Specialists;
- Human Resources Specialist, of the Institute of Management Specialists;
- Member of the Asian Academy of Management (MAAM);
- Member of the International Society of Gesture Studies (MISGS);
- Member of the Standing Council for Organisational Symbolism (MSCOS);
- Member of ResearchGate;
- Executive Member of Academy of Management (AOM). There, his contribution incorporates the judging of competitions, review of journal articles, and guiding the development of conference papers. He also contributes to the Disciplines of:
 - Human Resources;
 - Organization and Management Theory;
 - Organization Development and Change;
 - Research Methods;
 - Conflict Management;
 - Organizational Behavior;
 - Management Consulting;
 - Gender & Diversity in Organizations; and
 - Critical Management Studies.

Professor Dr. Crawford has been an Academic in the following UK Universities:

- University of London (Royal Holloway), as Research Tutor;
- University of Greenwich (Business School), as Senior Lecturer (Associate Professor), in Organisational Behaviour and Human Resource Management;
- University of Wolverhampton, (Wolverhampton Business School), as Senior Lecturer (Associate Professor), in Organisational Behaviour and Human Resource Management;
- London Southbank University (Business School), as Lecturer and Unit Leader.

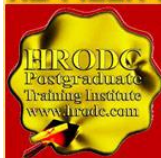
His responsibilities in these roles included:

- Doctoral Research Supervisor;
- Admissions Tutor;
- Postgraduate and Undergraduate Dissertation Supervisor;
- Programme Leader;
- Personal Tutor

For Whom This Course is Designed
This Programme is Designed For:

- Drilling Engineers;
- Process Engineers;
- Journeyman;
- Well Engineers;
- Geologists;
- Workover Personnel;
- Petroleum – Oil and Gas – Engineers;
- Petroleum – Oil and Gas – Accountants;
- Petroleum – Oil and Gas – Value Engineers;
- Petroleum – Oil and Gas – Strategic Planning Officers;
- Petroleum – Oil and Gas – Venture Capitalists;
- Shale Gas Drilling Experts;
- Oil and Gas Mineral Rights Holders;
- Oil and Gas Mineral Rights Leasers;
- Petroleum – Oil and Gas – Human Resource management (HRM) Personnel;
- National and State Mineral (Oil and Gas) Officials);
- Petroleum – Oil and Gas – Fund Managers;
- All others with a genuine Interest in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations.

Classroom-Based Duration and Cost:	
Classroom-Based Duration:	12 Weeks (5 Days per Week)
Classroom-Based Cost:	£45,000.00 Per Student
Online (Video-Enhanced) Duration and Cost	
Online Duration:	20 Weeks – 3 Hours Per Day, 6 Days Per Week
Online Cost:	£30,150.00 Per Student



Classroom-Based Programme 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;
- Postgraduate Diploma/ Diploma – Postgraduate –or
- Certificate of Attendance and Participation – if unsuccessful on resit.

Students and Delegates will be given a Selection of our Complimentary Products, which include:

- Our Branded Leather Conference Folder;
- Our Branded Leather Conference Ring Binder/ Writing Pad;
- Our Branded Key Ring/ Chain;
- Our Branded Leather Conference (Computer – Phone) Bag – Black or Brown;
- Our Branded 8-16 GB USB Flash Memory Drive, with Course Material;
- Our Branded Metal Pen;
- Our Branded Polo Shirt.;
- Our Branded Carrier Bag.

Daily Schedule: 9:30 to 4:30 pm.

Delivery Locations:

1. Central London, UK;
2. Dubai, UAE;
3. Kuala Lumpur, Malaysia;
4. Amsterdam, The Netherlands;
5. Brussels, Belgium;
6. Paris, France; and
7. Durban, South Africa;
8. Other International Locations, on request.

Programme for Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling

Leading to Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

Module Number	Pre-existing Course #	Module Title	Page #	Credit Value
1	090	Oil and Gas Operation for Non-Technical Oil and Gas Staff – Incorporating Oil and Gas Safety	8	Double
2	137	Deepwater Drilling Operations and Well Control	28	Quad
2	199.M5-8	Petroleum - Oil and Gas -Reservoir Engineering Practice	40	Quad
4	199.M9-11	Oil Well Testing	44	Triple

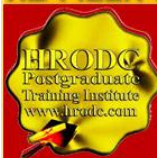
Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling, Programme

Leading to Postgraduate a Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

**Module 1
Contents, Concepts and Issues**

M1. Part 2: Oil and Gas Conceptual Exploration

3-D Seismic
 4-D Seismic
 Acidizing a well
 AFE (Authorization for Expenditure)
 Annular space
 Annulus of a well



M1. Part 2: Oil and Gas Conceptual Exploration

Anticline
API gravity
Associate gas
Barrel Standard
Basement rock
BCF (billion cubic feet)
Behind pipe
Biomass
Bleeding core
Blind pool
Blowout
Blowout insurance
Blue Sky Law
Bonus Money
BOP (blowout preventer)
Bottom-hole pressure
Bottom-hole pump
Brent Crude
Bridle
BS&W - (basic sediment and water)
Btu (British thermal unit)
Butane
Cable drilling
CAOF (calculated absolute open flow)
Capital Funds
Capital asset
Capital costs (Oil & Gas Tax Usage)
Capital expenditure
Capitalization
Carried Interest
Casing Pipe

M1. Part 2: Oil and Gas Conceptual Exploration

Casinghead
Casinghead gas
Casinghead gasoline
Caving's Rock
Cement
Cement squeeze
Christmas tree
Choke
Clean oil
CO2 injection
Coal gasification
Coal liquefaction
Cogeneration
Commissions
Common carrier
Completed well
Condensate
Confirmation well
Connate water
Conventional energy sources
Conveyance or Conveyancing
Core
Cracking
Crude oil
Crude oil equivalent
Cuttings
Deductions
Deed
Deepwater port
Delay rental
Deliverability

M1. Part 2: Oil and Gas Conceptual Exploration

Development
Diesel oil
Differential-pressure sticking
Directional drilling
Distillate
Distillate fuel oil
Distributor
Division Order
Domestic production
Down hole
Downstream
Drill bit
Drill string
Drilling
Drilling break
Drilling fund
Drilling mud
Drilling platform
Drilling rig
Drill stem test
Dry hole
Dry natural gas
Dual completion
Due Diligence
Economic interest
Electrical well logging
Ethanol
Expenses (Tax Usage)
Exploration
Exploratory well
External casing packer

M1. Part 2: Oil and Gas Conceptual Exploration

Extraction plant
Farm in
Farm out agreement
Farmer's oil
Fault
Fault trap
Fee lands
Feet of pay
Field
Filter cake
Fishing
Fishing tools
Five-spot water flood program
Flange up
Flaring
Flooding
Flow Through concept
Flowing well
Formation
Fossil fuels
Fracturing
Front-end costs
Fuel oil
Gamma-ray logging
Gas cap
Gas condensate
Gas lift
Gas-cut mud
Gas-oil ratio
Gasoline
General partner

M1. Part 2: Oil and Gas Conceptual Exploration

Geophones –
Geophysicist
Geothermal energy
Gravimeter
Gross income
Groundwater
Guaranteed payments
Gun perforation
Gusher
Hang the rods
Heating oil
Heavy oil
Held by production
Jones Act
History of a well
Horizon
Horizontal drilling
Horsehead
Hydraulic fracturing
Hydrocarbons
Hydrometer
Hydrostatic head
In situ
Independent producer
Infill drilling
Initial potential
Injection well
Intangible drilling
Investment Tax Credit (ITC)
Isopachous map
Jack or Unit

M1. Part 2: Oil and Gas Conceptual Exploration

Jet fuel
Jetting
Joint
Joint Operating Agreement
Joint venture
Junk basket
Kelly bushing
Kerogen
Kerosene
Key seating
Kick Occurs
Lag time
Landman
Landowner royalty
Law of capture
Lead lines
Lease (Oil and Gas)
Lease acquisition costs
Lease broker
Lease hound
Lease offering (lease sale)
Lease or Sublease
Lifting costs
Lignite
Limestone
Limited partner
Limited partnership
LNG (liquefied natural gas)
Logs
Lost circulation
LPG (liquefied petroleum gases)

M1. Part 2: Oil and Gas Conceptual Exploration

Mid-continent crude
Midstream or Middle distillates
Migration
Milling
Mineral Rights
MMCF Million cubic feet
Monocline
Mud
Mud engineer
Mud logger
Multiple completion
Natural gas
Naval petroleum reserves
Net profits interest
Net Revenue Interest (NRI)
NGL (natural gas liquids)
OCS (outer continental shelf)
Octane
Octane number
Offering memorandum
Offset well
Offshore platform
Oil column
Oil gravity
Oil in place
Oil pool
Oil rig
Oil run
Oil shale
Oilfield services
On the pump


M1. Part 2: Oil and Gas Conceptual Exploration

OPEC (Organization of Petroleum Exporting Countries)
Operator
Organization costs
Outcrop
Overriding Royalty (ORRI)
Overthrust belt
Packer
Pay zones
Payoff
Pay-out
Perforating gun
Perforation
Permeability
Petrochemicals
Petroleum
Petroleum engineer
Petroleum geologist
Pipeline
Pipeline gas
Plug back
Plugged & Abandoned (P&A)
Plugging a well
Pool
Pooling
Porosity
Possible reserves
Present net value
Primary recovery
Primary term
Private Placement Offering
Probable reserves

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.



M1. Part 2: Oil and Gas Conceptual Exploration

Producing horizon
Producing platform
Production
Production test
Proppants
Prospect
Proved behind-pipe reserves
Proved developed reserves
Proved reserves
Proved undeveloped reserves
Public lands
Public Offering
Pump
Pump off
Pumping well
Quad
Quitclaim deed
R&D
Ram
Re-entry
Reamer
Reclamation
Recoverable resources
Reef
Refiner
Refining
Relief well
Reserve
Reserve (pool)
Reservoir
Reservoir pressure

M1. Part 2: Oil and Gas Conceptual Exploration

Retained Interest
Reversionary interest
Risk
Roof rock
Rotary drilling
Round trip
Roustabout
Royalty
Royalty Funds
Run ticket
Running the tools
Salt dome
Salt-bed storage
Sample
Sample log
Sandstone
Saturation
Schlumberger (slumber-jay)
Scout
Secondary recovery
Section
Securities
Securities Act of 1933
Securities Exchange Act of 1934
Sedimentary basin
Sedimentary rock
Seismic exploration
Seismograph.
Selling Expenses
Separator
Service well

M1. Part 2: Oil and Gas Conceptual Exploration

Set casing
Severance
Severance tax
Shale
Shale oil
Shale shaker
Sharing arrangement
Shoestring sands
Shoot a well
Show
Shut-down well/shut-in well
Shut-in
Shut-in pressure
Shut-in Royalty
Side track
Skidding the rig
Solution
Sour Crude or Gas
Source rock
Spacing unit
Spot market
Spud
Squeeze
Steel reef
Step-out well
Stipper oil well
Stock tank barrel
Stratigraphic test
Stratigraphic trap
Structural trap
Structure

M1. Part 2: Oil and Gas Conceptual Exploration

Submersible drilling barge
Submersible pump
Subscription
Substructure
Supervisory fee
Surface rights
Swab
Sweet crude
Syncline
Syndication expenses
Synfuels
Synthetic crude oil (Syncrude)
Synthetic gas
Take-or-pay contract
Tank bottoms
Tanker
Tar sand
Tar sands
Tax preference items
TCF
Tectonic map
Tender
Tertiary recovery
Term
Third for a quarter
Tight formation
Tight hole
Tight sand
Time value of money
Title
Tool pusher

M1. Part 2: Oil and Gas Conceptual Exploration

Top lease
Total depth (TD)
Township
Transfer rule
Trap
Trip
Tubing
Turnkey
ULCC (Ultra large crude carrier)
Unassociated gas
Underwriter
Undiscovered recoverable resources
Up dip well
Upstream
Vapour pressure
Viscosity
VLCC (very large crude carrier)
Wall sticking
Wasting assets
Water drive
Water-drive reservoir
Water flooding
Well program
Wellbore
Wellhead
West Texas Intermediate
Wet
Wet gas
Whip stock
Wildcat
Wildcatter

M1. Part 2: Oil and Gas Conceptual Exploration

Working interest
Work over
Work over rig
Write-off
Zone
Zone Isolation.

M1. Part 2: Introducing the Oil Subsectors

- Horizontal, Vertical and Full Integration activities, including:
 - Exploring for Oil and Gas
 - Developing Fields
 - Producing Oil and Gas
 - Mining Oil Sands
 - Extracting Bitumen
 - Liquefying Gas by Cooling (LNG)
 - Degasifying LNG
 - Converting Gas to Liquid Products (GTL)
 - Generating Wind Energy

- Downstream activities including:
 - Refining Oil into Fuels and Lubricants
 - Producing Petrochemicals
 - Developing Bio Fuels

- Trading
 - Retail Sales
 - Managing CO2 Emission
 - Supply and Distribution Business-To-Business Sales
- Exploring Vertical Integration in Relation to the Following Potentially Advantages:
- Reduction in transportation costs, where common ownership results in closer geographic proximity.
 - Improvement in the supply chain coordination.
 - Provision of more opportunities to differentiate by means of increased control over inputs.
 - Capturing of upstream or downstream profit margins.
 - Increasing entry barriers to potential competitors, for example, sole access to a scarce resource.
 - Gaining access to downstream distribution channels that otherwise would be inaccessible.
 - Facilitating investment in highly specialised assets in which upstream or downstream players may be reluctant to invest.
 - Exploiting core competencies.
 - Capacity balancing issues, i.e., building excess upstream capacity to ensure that its downstream operations have enough supply under all demands.
 - Increased flexibility to coordinate vertically-related activities may increase
- Addressing Vertical Integration, with respect to the following potential disadvantages:
- Potentially higher costs due to low efficiencies resulting from lack of supplier competition.
 - Decreased flexibility due to previous upstream or downstream investments
 - Decreased ability to increase product variety if significant in-house development is required.
 - Developing new core competencies may compromise existing competencies.
 - Increased bureaucratic costs.

- Factors favouring horizontal integration, including:
 - Taxes and regulations on market transactions are simplified
 - Obstacles to the formulation and monitoring of contracts.
 - Strategic similarity between the vertically-related activities.
 - Sufficiently large production quantities so that the firm can Benefit from economies of scale.
 - Creation of barriers of entry, resulting in the reluctance of other firms to make investments specific to the sector of the industry larger firms operate in

- Other factors relevant to Oil and Gas Production, incorporating:
 - Oil Well Lease
 - Long-term explicit contracts
 - Franchise agreements
 - Joint ventures
 - Co-location of facilities
 - Implicit contracts (relying on firms' reputation
 - Geological Research and Oil Exploration
 - Drilling or Mining
 - Basic Drilling Operation
 - Natural vs. Artificial Lifts in Oil and Gas Production
 - Coalbed methane drilling technology
 - Principles of Gas Processing
 - Oil Well Drilling
 - Spudding Oil and Gas Wells
 - Oil and Gas Rig Operation
 - Offshore Oil Rig Operation
 - Successful Effort Accounting
 - Horizontal Drilling
 - Marketing Oil and Gas
 - Oil and Gas Production Separator Principles
 - Oil -Water Separator Offshore
 - Oil Separator

- Principles of Amine Sweetening
- Production Separator Principles
- Glycol Dehydration Principles
- Emulsions and Vertical Heater Treater Principles

M1. Part 2: Oil and Gas Safety

- HSE Offshore Statistics
- Hydrocarbon Releases (HCRs)⁵
- Fatal and major injuries to offshore workers
- Types of Accidents
- Over- 3-day injuries to offshore workers
- Dangerous Occurrences offshore
- Incidence of ill health to workers offshore

- Oil and Gas Industry Safety Regimes/ Institutions and Their Safety Regulation and Monitoring System
- American Petroleum Institute: Environmental Health & Safety
- Enform
- A Step Change in Safety
- Fire and Blast Information Group
- National Offshore Petroleum Safety Authority
- OSHA Oil and Gas Well Drilling and Servicing Work safe
- BC Health & Safety Centre for Petroleum
- Health and Safety Executive (HSE)
- Petroleum Industry's Annual Safety Seminar
- Safety Relief Valves and Rupture Discs
- Pressure Safety Valves (PSV), Operation and Testing
- Gas well blowouts
- Hydrogen Sulphide
- Hydrogen Sulphide Principles

- Hydrogen Sulphide (H₂S) Safety for Oil and Gas
- Rig Accidents
- Actinia Oil Rig Blowout
- Blow-Out preventers – (BOP)
- New Generation of BOPs
- Malfunctioning of BOPs
- Dealing with Blowouts
- Analysing the BP Oil Disaster

Module 2 Deepwater Drilling Operations and Well Control

M2. Part 1: Deepwater Drilling Operations

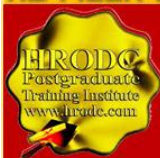
- Exploring the Deepwater
- Identifying the Prospect
- Drilling a Wildcat
- Deepwater Plays in Context
- Geology the Shelf vs. the Deepwater
- Drilling and Completing Wells
- The Well Plan
- Rig Selection
- Drilling
- Completing the Well
- Special Problems
- Development Systems
- Development Systems Choices
- Choosing Development Systems
- Fixed Structures
- The Concrete Flat form
- The Compliant Tower

Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling Programme, Leading to Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

- Installing Platforms
- Installing Concrete Gravity Platform
- Setting the Pipeline Riser
- Floating Production Systems
- Tension Leg Platforms TLP
- Monocolumn TLP
- Floating Production Storage and Offloading Unit (FPSO)
- Floating, Drilling, Production, Storage Offloading Unit (FDPSO)
- Floating Production Storage Vessel (FPS)
- Spars
- Mooring Spreads
- Subsea Systems
- Wells
- Manifold and Sleds
- Flowline Jumpers and Gathering
- Umbilical's and Flying Leads
- Control Systems
- Flow Assurance
- System Architecture and Installation
- ROVS
- Topsides
- Oil Treatment
- Water Treatment
- Gas Treatment
- Safety Systems
- Auxiliary Systems
- Pipelines Flowlines and Risers
- The Boon and Bane of Buoyancy
- Laying Pipe
- Bottom Conditions
- Risers
- Pipeline System Operations

Postgraduate Diploma in Drilling Operation:- Page 25 of 54

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK



Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.
Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.;
M. RG. C.

- Technology and Third Wave

M2. Part 2: Well Control

Equipment in Well Control Operations

- Pressure, Erosion, Corrosion and Vibration
 - Pressure
 - Vibration
 - Erosion
 - Corrosion
 - Threaded Connections
 - The Stack
 - The Choke Line
 - The Choke Manifold
 - The Valves
 - The Drilling Choke
- The Panic Line
- The Header
 - The Separator
 - The Kill Line
 - The Stabbing Valve

Classic Pressure Control Procedures While Drilling

- Causes of Well Kicks and Blowouts
- Mud Weight Less Than Formation Pore Pressure
- Failure to Keep the Hole Full and Swabbing While Tripping
- Lost Circulation
- Mud Cut
- Indications of a Well Kick
 - Sudden Increase in Drilling Rate
 - Increase in Pit Level or Flow Rate

- Change in Pump Pressure
 - Reduction in Drill Pipe Weight
 - Gas, Oil or Water-Cut Mud
 - Shut-In Procedure
 - Circulating Out the Influx
- Theoretical Considerations
- Gas Expansion
 - The U-Tube Model
 - The Driller's Method
 - The Wait and Weight Method

Pressure Control Procedures While Tripping

- Causes of Kicks While Tripping
- Trip Sheets and Filling Procedures
 - Periodic Filling Procedure
 - Continuous Filling Procedure
 - Tripping in the Hole
- Shut-In Procedure
- Well Kicks While Tripping
 - Stripping in the Hole

Special Conditions, Problems and Procedures in Well Control

- Significance of Surface Pressures
- A Kick Is Taken While Drilling
 - Influx Migration
 - Safety Factors in Classical Pressure Control Procedures
 - Circulating a Kick Off Bottom
 - Classical Procedures - Plugged Nozzle Effect
 - Classical Procedures – Drill String Washout Effect
 - Determination of Shut-In Drill Pipe Pressures
 - Determination of the Type of Fluid That Entered the Wellbore
 - Frictional Pressure Losses

Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling Programme, Leading to Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

- Annulus Pressure Profiles with Classical Procedures
- Constant Casing Pressure, Constant Drill Pipe Pressure and Modification of the Wait and Weight Method
- The Low Choke Pressure Method
- Reverse the Bubble Out Through the Drill Pipe
- The Overkill Wait and Weight Method
- Slim Hole Drilling - Continuous Coring Considerations
- Stripping with Influx Migration
- Oil-Base Mud in Pressure and Well Control Operations
- Fire
- Solubility of Natural Gas in Oil-base Mud
- Floating Drilling and Subsea Operation Considerations
 - Subsea Stack
 - Spacing Out
 - Shut-In Procedures
 - Floating Drilling Well Control Problems
 - Fluctuations in Flow Rate and Pit Volume
 - Frictional Loss in the Choke Line
 - Reduced Fracture Gradient
 - Trapped Gas after Circulating Out a Kick
 - Deep Water Floating Drilling
 - Shallow Gas Kicks

Fluid Dynamics in Well Control

- Kill-Fluid Bulkheading
- Kill-Fluid Lubrication - Volumetric Kill Procedure
- Dynamic Kill Operations
- The Momentum Kill

M2. Part 3: Deepwater Drilling Equipment and Operations

Selection of Drilling Practices

- Introduction
- Surface Equipment
- When and How to Close the Well
- Gas-Cut Mud
- The Closed Well
- Kick Control Procedures
 - Driller's Method
 - Engineer's Method
 - Volumetric Method
- Maximum Casting Pressure
- Maximum Borehole Pressure

Fishing Operations and Equipment

- Causes and Prevention
- Pipe Recovery and Free Point
- Parting the Pipe
 - Chemical Cut
 - Jet Cutter
 - Internal Mechanical Cutter
 - Outside Mechanical Cutter
 - Multi-String Cutter
 - Severing tool
 - Wash over Back-off Safety Joint/Wash over Procedures
- Jars, Bumper Subs and Intensifiers
 - Drill Collars in a Jarring Assembly
 - Fluid Accelerator or Intensifier
- Attachment Devices
 - Cutlip Screw-in Sub

- Skirted Screw-in Assembly
- External Engaging Devices
- Series 150 Releasing and Circulating Overshot
- High-Pressure Pack-Off
- Oversize Cutlip Guide
- Wall hook Guide
- Hollow Mill Container and Hollow Mill
- Bowen Series 70 Short Catch Overshot
- Internal Engaging Devices
- Box Taps and Taper Taps
- Fishing for Junk
 - Poor Boy Junk Basket
 - Boot Basket
 - Core Type Junk Basket
 - Jet Powered Junk Baskets and Reverse Circulating Junk Baskets
 - Hydrostatic Junk Baskets
 - Milling Tools
 - Mill Design
 - Impression Block
 - Fishing Magnets
 - Junk Shots
- Abandonment
- Wirelines
 - Wireline Construction
 - Electrical Conductors
 - Simple Armored Wirelines
 - Armored Wirelines with Electrical Conductors
 - Wireline Operating and Breaking Strength
 - Wireline Stretching

Casing and Casing String Design

- Types of Casing
- Casing Data
 - Process of Manufacture
 - Material Requirements (Section 7, API Specification 5CT)
 - Dimensions, Masses, Tolerances (Section, 8 API Specification 5CT)
 - Elements of Threads
 - Extreme-Line Casing (Integral Connection)
 - Thread Protectors
 - Joint Strength (Section 9 of API 5C3)
- Combination Casing Strings
 - Design Consideration
 - Surface and Intermediate Strings
 - Production String
 - Tension Load
 - Compression Load
- Running and Pulling Casing
 - Preparation and Inspection Before Running
 - Drifting of Casing
 - Stabbing, Making Up, and Lowering
 - Field Makeup
 - Casing Landing Procedure
 - Care of Casing in Hole
 - Recovery of Casing
 - Causes of Casing Troubles

Well Cementing

- Introduction
- Chemistry of Cements
- Cementing Principles
- Standardization and Properties of Cements

- Properties of Cement Slurry and Set Cement
 - Specific Weight
 - Thickening Time
 - Strength of Set Cement
- Cement Additives
 - Specific Weight Control
 - Thickening Setting Time Control
 - Filtration Control
 - Viscosity Control
 - Special Problems Control
- Primary Cementing
 - Normal Single-Stage Casing Cementing
 - Large-Diameter Casing Cementing
 - Multistage Casing Cementing
 - Liner Cementing
- Secondary Cementing
- Squeeze Cementing

Tubing and Tubing String Design

- API Physical Property Specifications
 - Dimensions, Weights and Lengths
 - Performance Properties
- Running and Pulling Tubing
- Preparation and Inspection Before Running
 - Stabbing, Making Up and Lowering
 - Field Makeup
 - Pulling Tubing
 - Causes of Tubing Trouble
 - Selection of Wall Thickness and Steel Grade of Tubing
 - Tubing Elongation/Contraction Due to the Effect of Changes in Pressure and Temperature
 - Packer-To-Tubing Force

- Permanent Corkscrewing
- Packers
 - Protecting the Casing
 - Safety
 - Energy Conservation
 - Improve Productivity
 - Piston Effect
 - Buckling Effect
 - Ballooning Effect
 - Temperature Effect
 - Total Effect
 - Coiled Tubing

M2. Part 4: Well Control

Special Services in Well Control

- Snubbing
- Equipment and Procedures
 - The Snubbing Stack
 - The Snubbing Procedure
 - Snubbing Equipment
 - Theoretical Considerations
 - Equipment Specifications
 - Buckling Considerations
 - Special Buckling Considerations
- Fire Fighting and Capping
 - Fire Fighting
 - Extinguishing the Fire
 - Capping the Well
 - Freezing
 - Hot Tapping

- Jet Cutting

Relief Well Design and Operations

- History
 - Ulsel and Magnetic Interpretation Introduced
 - Schad's Contribution
 - Magrange Developed
 - Wellspot Developed
 - Magrange and Wellspot Compared
- Reliability of Proximity Logging
- Reliability of Commercial Wellbore Survey Instruments
- Subsurface Distance Between Relief Well and Blowout
- Surface Distance Between Relief Well and Blowout
- Summary
- Relief Well Plan Overview

The Underground Blowout

- Casing Less Than 4000 Feet
- Pipe Below 4000 Feet
- Charged Intervals - Close Order Seismic - Vent Wells
- Shear Rams
- Cement and Barite Plugs

Contingency Planning

The Al-Awda Project: The Oil Fires of Kuwait

- Overview of the Project
- The Problems
 - The Wind
 - Logistics
 - Water
 - Ground Fires

- Oil Lakes
- The Coke piles
- Control Procedures
 - The Stinger
 - The Capping Spool
 - The Capping Stack
- Extinguishing the Fires
 - Water
 - Nitrogen
 - Explosives
 - Novel Techniques
 - Cutting
 - Statistics
 - Safety

Module 3 Petroleum - Oil and Gas -Reservoir Engineering Practice

M3. Part 1: Reservoir Rocks, Fluid, Pressure

Porosity of Reservoir Rocks

- Total Porosity and Effective Porosity
- Sources of Porosity Data
- Applications of Porosity Data

Permeability and Relative Permeability

- Sources of Permeability Data
- Relative Permeability
- Sources of Relative Permeability
- Three-Phase Relative Permeability
- Applications of Permeability and Relative Permeability

➤ Reservoir Fluid Saturations

- Determination of Water Saturations
- Determination of Reservoir Productive Intervals

➤ Pressure-Volume-Temperature (PVT) Properties of Reservoir

- Gas and Gas-Condensate Properties
- Pseudo-critical Properties of Gas Mixtures
- Wet Gas and Gas Condensate
- Correlations for Gas Compressibility Factor
- Gas Formation Volume Factor (FVF)
- Gas Density
- Gas Viscosity
- Gas Coefficient of Isothermal Compressibility
- Correlations for Calculation of Oil PVT Properties
- Correlations for Calculation of Water PVT Properties

M3. Part 2: Reservoir Fluid Sampling and Reservoir Oil and Gas Flow

Reservoir Fluid Sampling and PVT Laboratory Measurements

- Overview of Reservoir Fluid Sampling
- Reservoir Type and State
- Well Conditioning
- Subsurface Sampling Methods and Tools
- Wire Line Formation Testers
- PVT Laboratory Measurements
- Applications of Laboratory PVT Measurements
- **Typical Reservoir Fluid Study for a Black Oil Sample**
- Reservoir Fluid Summary
- Calculated Analysis of Reservoir Fluid
- Pressure-Volume Properties at 212°F (Constant Composition Expansion)
- Differential Liberation at 212°F
- Gas Differentially Liberated at 212°F
- Viscosity Data at 212°F
- Comparison of Reservoir Oil Flash Liberation Tests
- **Typical Reservoir Fluid Study for a Gas Condensate Sample**
- Summary of Reservoir Data and Surface Sampling Conditions
- Chromatograph Analysis of Separator Gas at 1140 psig and 92°F
- Chromatograph Analysis of Separator Liquid at 1140 psig and 92°F
- Composition of Reservoir Fluid (Calculated)
- Measured Saturation Pressures from Stepwise Recombination at 267°F
- Pressure-Volume Properties of Reservoir Fluid at 267°F (or CCE)
- Depletion Study at 267°F: Hydrocarbon Analyses of Produced Well stream (Mole %)
- Retrograde Condensation During Gas Depletion at 267°F

PVT Properties Predictions from Equations of State

- Historical Introduction to Equations of State
- van der Waals (vdW) EOS
- Soave-Redlich-Kwong (SRK) EOS
- Peng-Robinson (PR) EOS
- Phase Equilibrium of Mixtures
- Roots from Cubic EOS
- Volume Translation
- Two-Phase Flash Calculation
- Bubble Point and Dew Point Pressure Calculations
- Characterization of Hydrocarbon Plus Fractions
- Phase Equilibrium Predictions with Equations of State

The General Material Balance Equation

- Derivation of the General Material Balance Equation (GMBE)
- The GMBE for Gas Reservoirs
- Discussion on the Application of the GMBE

Gas Reservoirs

- Volumetric Gas Reservoirs
- Gas Reservoirs with Water Influx
- Water Influx Models
- Geopressed Gas Reservoirs
- Case Histories of Two Gas Reservoirs
- *Correlations for Estimating Residual Gas Saturations for Gas Reservoirs under Water Influx*
- *Dimensionless Pressure for Finite and Infinite Aquifers*
- *Dimensionless Pressure for Infinite Aquifers*

Oil Reservoirs

- Oil Reservoir Drive Mechanisms
- Gravity Drainage Mechanism
- Volumetric Under-saturated Oil Reservoirs
- Under-saturated Oil Reservoirs with Water Influx
- Volumetric Saturated Oil Reservoirs
- Material Balance Approach for Saturated Oil Reservoirs with Water Influx
- Case History of Manatee Reservoirs

Fluid Flow in Petroleum Reservoirs

- Fluid Types
- Definition of Fluid Flow Regimes
- Darcy Fluid Flow Equation
- Radial Forms of the Darcy Equation
- Derivation of the Continuity Equation in Radial Form
- Derivation of Radial Diffusivity Equation for Slightly Compressible Fluids
- Solutions of the Radial Diffusivity Equation for Slightly Compressible Fluids
- Derivation of the Radial Diffusivity Equation for Compressible Fluids
- Transformation of the Gas Diffusivity Equation with Real Gas Pseudo-Pressure Concept
- The Superposition Principle
- Well Productivity Index
- Well Injectivity Index

Module 4 Oil Well Testing

M4. Part 1: Oil Well Testing and Reservoir Oil Flow Analysis

Oil Well Testing Familiarization

- History of Oil Well Testing
- Role of Oil Well Tests and Information in Petroleum Industry
- Oil Well Test Data
- Acquisition
- Analysis
- Management
- Selecting Oil Wells for Optimum Stimulation Treatment
- Reservoir System Characterization Process
- Scope and Objective
- Organization
- Unit's System and Conversations

Reservoir Oil Flow Analysis

- Basic Fluid Flow Equations in Oil Reservoir
- Numerical Models and their Applications
- Unsteady-State Pressure Distribution Calculations in Directional Well

M4. Part 2: Horizontal Oil Well Testing and Pressure Control

Transient Well Testing Methods for Horizontal Oil Wells

- Flow Equations for Horizontal Oil Wells
- Horizontal Oil Well Performance During Transient State
- Transient Well Testing Techniques in Horizontal Oil Wells
- Flow Time Equations and Solutions
- Pressure Response Equations and Methods of Analysis
- Horizontal Well Response and Normalized Pressure Derivative
- Effects of Wellbore Storage

Pressure Drawdown Testing Techniques for Oil Wells

- Pressure-Time History for Constant-Rate Drawdown Test
- Transient Analysis
- Infinite-Acting Reservoirs
- Late Transient Analysis
- Bounded (Developed) Reservoirs
- Semi-Steady-State Analysis
- Reservoir Limit Test
- Two-Rate Flow Test Analysis
- Variable-Rate Flow Tests
- Multi-Rate Flow Test Analysis
- Drawdown Rate Normalization Methods

Pressure Build-up Analysis Techniques for Oil Wells

- Ideal Pressure Build-up Test
- Actual Build-up Test - Infinite Reservoir
- Pressure Build-up Test Analysis in Infinite-Acting Reservoir

- Pressure Build-up Testing Methods for Finite (Bounded) Reservoir
- Multiphase Build-up Test Analysis
- After Flow Analysis Using Russel's Technique
- Pressure Build-up Tests Preceded by Two Different Flow Rates
- Variable-Rate Pressure Build-up Analysis
- Rate Normalization Techniques and Procedures (Pressure Build-up Data)

M4. Part 3: Fracturing and Reservoir Pressure Estimation

Original and Average Reservoir Pressure Estimation Methods

- Original Reservoir Pressure in Infinite Reservoirs
- Estimating Average and Initial Reservoir Pressure
- Estimating Constant Pressure at Aquifer in Water-Drive Reservoirs

Well Testing Methods for Naturally Fractured Reservoirs

- Identifications of Natural Fractures
- Characteristics of Naturally Fractured Reservoirs
- Typical Pressure Drawdown Behaviour Curve Shapes
- Pressure Build-up Behaviour Characteristics
- Well Test Interpretation
- Methods
- Uses
- Limitations
- Build-up Analysis Techniques for Tight Reservoir Matrix
- Interpretation of Interference Tests in Matrix and Fractured Reservoirs
- Horizontal Well Pressure Behaviour Curve Shapes
- Horizontal Well Production Forecasting
- Dual-Porosity Reservoir

Type Curve Matching Methods for Oil Wells

- Application to Conventional Tests
- Fracture Type Curve Matching Techniques
- Type Curves
- Horizontal Fractured Oil Wells

Flow Regime Identification and Analysis Using Special Methods

- Fracture Linear Flow Period
- Bilinear Flow
- Formation Linear Flow
- Pseudo-Radial Flow
- Type Curve Matching Methods
- Field Case Studies

Application of Pressure Derivative in Oil Well Test Analysis

- Pressure Derivative Applications in Well Test Analysis
- Pressure Derivative Analysis Methods
- Fractured Reservoir Systems
- Pressure Derivative Trends for Other Common Flow Regimes

Massive Hydraulic-Fractured Oil Well Behaviour Analysis

- Methods of Evaluating MHF Oil Wells
- Analysing Infinite Flow Capacity Fractures
- Analyzing Finite Flow Capacity Fractures
- Estimating Formation Characteristics of Finite Conductivity Fractures
- Pre-treatment Testing of Hydraulically Fractured Candidate

M4. Part 4: Drill-Stem, Well and Reservoir Testing and Analysis

Drill-Stem Testing Methods

- DST Equipment and Operational Procedures
- Recommended Flow and Shut-In Time for Drill-Stem Tests
- Troubleshooting DST Pressure Charts
- Checking Validity and Consistency of Reporting DST Data
- Estimation of Average Flow Rate
- DST Analysis
- Methods
- Uses
- Limitations
- Wire Line Formation Test Data Evaluation

Interference and Pulse Test Analysis Methods

- Interference Test Analysis Techniques
- Analysis of Pulse Test Pressure Response
- Vertical Pulse Test Design and Analysis Methods
- Design and Analysis of Unequal Pulses

Injection Well Transient Testing Analysis

- Injectivity Test Analysis Methods
- Pressure Fall-Off Test Analysis Methods
- Two-Rate Injectivity Test Analysis
- Step-Rate Injectivity Testing Technique

Well Testing Methods in Multi-layered Oil Reservoir Systems

- Identification of Layered Oil Reservoir Systems
- Analysing Pressure Behaviour in Multi-layered Systems
- Concept of Reservoir Layer Fracture Conductivity
- Pressure Production Performance Response Equations
- Investigating Degree of Communication and Type of Crossflow
- Pressure Build-up Characteristics in Layered Reservoir Systems
- Pressure Analysis Methods for Oil Well Producing Commingled Zones
- Factors Affecting Multi-layered Reservoir Performance
- Economic Aspects of Interlayer Crossflow

Pressure Analysis Methods in Heterogeneous Oil Reservoir Systems

- Effect of Pressure on Rock Properties
- Major Causes of Heterogeneities
- Pressure Responses Near No Flow Boundaries
- Effect of Hydraulic Diffusivity on Reservoir Behaviour
- Simple Procedures and Guidelines to Estimate Reservoir Heterogeneity properties
- General Approach to Estimate Fracture Trends or Heterogeneity
- Determination of Reservoir Parameter and Fracture Orientations
- Defining Reservoir Heterogeneity by Multiple-Well Tests
- Method for Calculating Fracture Orientation
- Estimating Two-Dimensional Permeability with Vertical Interference Testing
- Application of Pulse Tests to Describe Reservoir Heterogeneity
- Validity of Various Models and Steps Used to Obtain Reservoir Description

Postgraduate Diploma, Postgraduate Certificate, and Diploma – Postgraduate - Short Course Regulation

Postgraduate Certificate, Postgraduate Diploma, and Diploma – Postgraduate: Their Distinction, Credit Value and Award Title

Postgraduate Short Courses of a minimum of five days' duration, are referred to as Diploma – Postgraduate. This means that they are postgraduate credits, towards a Postgraduate Certificate and Postgraduate Diploma. Postgraduate Certificate and Postgraduate Diploma represent Programmes of Study, leading to Awards bearing their title prefixes. While we refer to our short studies, of 5 days to five weeks, as 'Courses', those with duration of 6 weeks and more are labelled 'Programmes'. Nevertheless, in line with popular usage, we often refer to all study durations as 'Courses'. Another mark of distinction, in this regard, is that participants in a short course are referred to as 'Delegates', as opposed to the term 'Students', which is confined to those studying a Postgraduate Programme.


Courses are of varying Credit-Values; some being Single-Credit, Double-Credit, Triple-Credit, Quad-Credit, 5-Credit, etc. These short courses accumulate to Postgraduate Certificate, with a total of 180 Credit-Hours (= 6 X 5-Day Courses or 3 X 10-Day Courses), or Postgraduate Diploma, with a total of 360 Credit-Hours (= 12 X 5-Day Courses or 6 X 10-Day Courses).

Delegates studying courses of 5-7 days' duration, equivalent to 30-42 Credit-Hours (Direct Lecturer Contact), will, on successful assessment, receive the Diploma – Postgraduate Award. 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.

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.



Postgraduate Certificate, Postgraduate Diploma, and Diploma – Postgraduate Assessment Requirement

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, Postgraduate Certificate, or Postgraduate Diploma, as appropriate.

In the case of Diploma – Postgraduate, a minimum of 70% overall pass is expected. In order to receive the Awards of Postgraduate Certificate and Postgraduate Diploma, candidates 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 Certificate, 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 Certificate, and Postgraduate Diploma Application Requirements

Applicants for Diploma – Postgraduate – Postgraduate Certificate, and Postgraduate Diploma 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 assess applicants' suitability for the Course or Programme for which they have applied;
- If they are accepted on their chosen Course or Programme, 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 Course or Programme Tutor will contact him or her, by e-mail or telephone, welcoming him or her to HRODC Postgraduate Training Institute;
- Those intending to study in a foreign country, and require a Visa, will be sent the necessary immigration documentation, to support their application;
- Applicants will be notified of the dates, location and venue of enrolment and orientation, where appropriate.

Modes of Study and Duration of Postgraduate Certificate and Postgraduate Diploma Programmes

There are two delivery formats for Postgraduate Certificate and Postgraduate Diploma Programmes, as follows:

1. Intensive Full-time (Classroom-Based) Mode, lasting 3 months for Postgraduate Diploma, and 6 weeks for Postgraduate Certificate. These durations are based on six hours' lecturer-contact per day, five days (30 hours) per week, for Postgraduate Diploma;
2. Video-Enhanced On-Line Mode. This interactive online mode lasts twenty (20) weeks, for Postgraduate Diploma, and ten (10) weeks for Postgraduate Certificate. Our calculation is based on three hours per day, six days per week.

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

Introducing Our Video-Enhanced Online Study Mode

In a move away from the traditional online courses and embracing recent developments in technology-mediated distance education, HRODC Postgraduate Training Institute has introduced a Video-Enhanced Online delivery. This Online mode of delivery is revolutionary and, at the time of writing, unique to HRODC Postgraduate Training Institute.

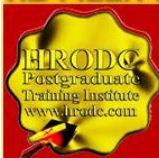
You are taught as individuals, on a one-to-one or one-to-small-group basis. You see the tutor face to-face, for the duration of your course. You will interact with the tutor, ask and address questions; sit examinations in the presence of the tutor. It is as real as any face-to-face lecture and seminar can be. Choose from a wide range of Diploma – Postgraduate Courses and an increasing number of Specialist Postgraduate Certificate and Postgraduate Diploma Programmes. You might also accumulate Postgraduate Short Courses, via this mode of study, over a 6-year period, towards a Postgraduate Certificate or Postgraduate Diploma.

Key Features of Our Online Study: Video-Enhanced Online Mode

- The tutor meets the group and presents the course, via Video, in a similar way to its classroom-based counterpart;
- All participants are able to see, and interact with, each other, and with the tutor;
- They watch and discuss the various video cases and demonstrations that form an integral part of our delivery methodology;
- Their assessment is structured in the same way as it is done in a classroom setting;
- The Video-Enhanced Online mode of training usually starts on the 1st of each month, with the cut-off date being the 20th of each month, for inclusion the following month;
- Its duration is twice as long as its classroom-based counterpart. For example, a 5-day (30 Credit Hours) classroom-based course will last 10 days, in Video-Enhanced Online mode. This calculation is based on 3 hours tuition per day, adhering to the Institute's required 30 Credit-Hours;
- The cost of the Video-Enhanced Online mode is 67% of similar classroom-based courses;

Postgraduate Diploma in Drilling Operation:- Page 49 of 54

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK



Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.
Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.;
M. RG. C.

Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling Programme, Leading to Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

- For example, a 5-day classroom-based course, which costs Five Thousand Pounds, is only Three Thousand Three Hundred and Fifty Pounds (£3,350.00) in Video-Enhanced Online Mode.

10-Week Video-Enhanced Online Postgraduate Certificate and 20-Week Video-Enhanced Online Postgraduate Diploma

You might study an Online Postgraduate Certificate or Online Postgraduate Diploma, in 10 and 20 weeks, respectively, in the comfort of your office or homes, through HRODC Postgraduate Training Institute's Video-Enhanced Online Delivery. We will deliver the 180 Credit-Hours and 360 Credit-Hours, in line with our regulation, through 'Direct-Lecturer-Contact', within the stipulated timeframe. We aim to fit the tuition around your work, family commitment and leisure, thereby enhancing your maintenance of an effective 'work-study-life-style balance', at times convenient to you and your appointed tutor.

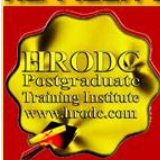
Cumulative Postgraduate Certificate and Postgraduate Diploma Courses

All short courses can accumulate to the required number of Credit-Hours, for the Postgraduate Certificate and Postgraduate Diploma, over a six-year period from 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, as is tabulated below.

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 one or two credits be attempted each year. This will ensure that the required 180 Credit-Hours and 360 Credit-Hours, for the Postgraduate Certificate and Postgraduate Diploma, respectively, are

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK



Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.

achieved, within the designated period. These Credit-Values, awards and their accumulation are exemplified below.

Examples of Postgraduate Course Credits: Their Value, Award Prefix & Suffix – Based on 5-Day Multiples		
Credit Value	Credit Hours	Award Title Prefix (& Suffix)
Single-Credit	30-54	Diploma - Postgraduate
Double-Credit	60-84	Diploma – Postgraduate (Double-Credit)
Triple-Credit	90-114	Diploma – Postgraduate (Triple-Credit)
Quad-Credit	120-144	Diploma – Postgraduate (Quad-Credit)
5-Credit	150-174	Diploma – Postgraduate (5-Credit)
6-Credit	180-204	Postgraduate Certificate
7-Credit	210-234	Postgraduate Certificate (+ 1 Credit)
8-Credit	240-264	Postgraduate Certificate (+2 Credits)
9-Credit	270-294	Postgraduate Certificate (+3 Credits)
10-Credit	300-324	Postgraduate Certificate (+ 4 Credits)
11-Credit	330-354	Postgraduate Certificate (+5 Credits)
12-Credit	360	Postgraduate Diploma
360 Credit-Hours = Postgraduate Diploma		
12 X 5-Day Courses = 360 Credit-Hours = Postgraduate Diploma		
10 X 6-Day Courses = 360 Credit-Hours = Postgraduate Diploma		


Exemplification of Accumulated Postgraduate Certificate and Postgraduate Diploma Award Titles

All Specialist Postgraduate Certificate and Postgraduate Diploma Programmes have their predetermined Award Titles. Where delegates do not follow a Specialism, for accumulation to a Postgraduate Diploma, they will normally be Awarded a General Award, without any Specialist Award Title. However, a Specialist Award will be given, where a delegate studies

HRODC Postgraduate Training Institute
 HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.




at least seventy percent (70%) of his or her courses in a specialist grouping. These are exemplified below:

1. **Postgraduate Diploma in Accounting and Finance;**
2. **Postgraduate Certificate in Accounting and Finance;**
3. **Postgraduate Certificate in Aviation Management;**
4. **Postgraduate Diploma in Aviation Management;**
5. **Postgraduate Certificate in Industrial Health and Safety Management, Incorporating Oil and Gas Safety;**
6. **Postgraduate Diploma in Industrial Health and Safety Management, Incorporating Oil and Gas Safety;**
7. **Postgraduate Certificate in Business Communication;**
8. **Postgraduate Diploma in Business Communication;**
9. **Postgraduate Certificate in Corporate Governance;**
10. **Postgraduate Diploma in Corporate Governance;**
11. **Postgraduate Certificate in Costing and Budgeting;**
12. **Postgraduate Diploma in Costing and Budgeting;**
13. **Postgraduate Certificate in Client or Customer Relations;**
14. **Postgraduate Diploma in Client or Customer Relations;**
15. **Postgraduate Certificate in Engineering and Technical Skills;**
16. **Postgraduate Diploma in Engineering and Technical Skills;**
17. **Postgraduate Certificate in Events Management;**
18. **Postgraduate Diploma in Events Management;**
19. **Postgraduate Certificate in Health and Safety Management;**
20. **Postgraduate Diploma in Health and Safety Management;**
21. **Postgraduate Certificate in Health Care Management;**
22. **Postgraduate Diploma in Health Care Management;**
23. **Postgraduate Certificate in Human Resource Development;**
24. **Postgraduate Diploma in Human Resource Development;**
25. **Postgraduate Certificate in Human Resource Management;**
26. **Postgraduate Diploma in Human Resource Management;**

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.




- 27. Postgraduate Certificate in Information and Communications Technology (ICT);**
- 28. Postgraduate Diploma in Information and Communications Technology (ICT);**
- 29. Postgraduate Certificate in Leadership Skills;**
- 30. Postgraduate Diploma in Leadership Skills;**
- 31. Postgraduate Certificate in Law – International and National;**
- 32. Postgraduate Diploma in Law – International and National;**
- 33. Postgraduate Certificate in Logistics and Supply Chain Management;**
- 34. Postgraduate Diploma in Logistics and Supply Chain Management;**
- 35. Postgraduate Certificate in Management Skills;**
- 36. Postgraduate Diploma in Management Skills;**
- 37. Postgraduate Certificate in Maritime Studies;**
- 38. Postgraduate Diploma in Maritime Studies;**
- 39. Postgraduate Certificate in Oil and Gas Operation;**
- 40. Postgraduate Diploma in Oil and Gas Operation;**
- 41. Postgraduate Certificate in Oil and Gas Accounting;**
- 42. Postgraduate Diploma in Oil and Gas Accounting;**
- 43. Postgraduate Certificate in Politics and Economic Development;**
- 44. Postgraduate Diploma in Politics and Economic Development;**
- 45. Postgraduate Certificate in Procurement Management;**
- 46. Postgraduate Diploma in Procurement Management;**
- 47. Postgraduate Certificate in Project Management;**
- 48. Postgraduate Diploma in Project Management;**
- 49. Postgraduate Certificate in Public Administration;**
- 50. Postgraduate Diploma in Public Administration;**
- 51. Postgraduate Certificate in Quality Management;**
- 52. Postgraduate Diploma in Quality Management;**
- 53. Postgraduate Certificate in Real Estate Management;**
- 54. Postgraduate Diploma in Real Estate Management;**

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.



Drilling Operation: On-Shore and Deepwater Oil and Gas Drilling Operations, Incorporating Shale Gas Drilling Programme, Leading to Postgraduate Diploma in Petroleum – Oil and Gas – On-Shore and Deepwater Drilling Operations

55. Postgraduate Certificate in Research Methods;

56. Postgraduate Diploma in Research Methods;

57. Postgraduate Certificate in Risk Management;

58. Postgraduate Diploma in Risk Management;

59. Postgraduate Certificate in Sales and Marketing;

60. Postgraduate Diploma in Sales and Marketing;

61. Postgraduate Certificate in Travel, Tourism and International Relations;

62. Postgraduate Diploma in Travel, Tourism and International Relations.

The actual courses studied will be detailed in a student or delegate's Transcript.

Service Contract, incorporating Terms and Conditions

[Click, or copy and paste the URL, below, into your Web Browser, to view our Service Contract, incorporating Terms and Conditions.](https://www.hrodc.com/Service_Contract_Terms_and_Conditions_Service_Details_Delivery_Point_Period_Cancellations_Extinuating_Circumstances_Payment_Protocol_Location.htm)

https://www.hrodc.com/Service_Contract_Terms_and_Conditions_Service_Details_Delivery_Point_Period_Cancellations_Extinuating_Circumstances_Payment_Protocol_Location.htm

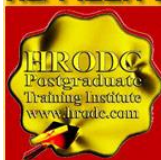
The submission of our application form or otherwise registration by of the submission of a course booking form or e-mail booking request is an attestation of the candidate's subscription to our Policy Terms and Conditions, which are legally binding.

Prof. Dr. Ronald B. Crawford
Director

HRODC Postgraduate Training Institute

Postgraduate Diploma in Drilling Operation:- Page 54 of 54

HRODC Postgraduate Training Institute
HQ : 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK



Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.
Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.;
M. RG. C.