

HRODC Postgraduate Training Institute



A Postgraduate - Only Institution



#254

Power Generators and Transformers: Their Configuration, Installation, Operation, Maintenance and Repair

Postgraduate Short Course

Leading To:

DIPLOMA - POSTGRADUATE IN

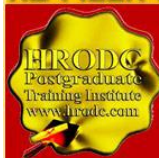
Installation, Maintenance and Repair of Power Generators and Transformers (Quad Credit) = 120 Credit-Hours

Accumulating to A

Postgraduate Certificate, With 60 Additional Credit-Hours, or A

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 Diploma, With 240 Additional Credit-Hours



HRODC POSTGRADUATE TRAINING INSTITUTE
A Postgraduate – Only Institution

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

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HRODC Postgraduate Training Institute, A Postgraduate-Only Institution

Our UK Government's Verification and Registration

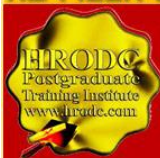
Our Institute is Verified by, and Registered with, the United Kingdom (UK) Register of Learning Providers (UKRLP), of the Department for Education (DfE). Its UK Provider Reference Number (UKPRN) is: 10019585 and might be located at: <https://www.ukrlp.co.uk/>.

Course 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);

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- Postgraduate Certificate in Information Systems (University of West London, formerly Thames Valley University);
- Diploma in Doctoral Research Supervision, (University of Wolverhampton);
- Teaching Certificate;
- 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;

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- Postgraduate and Undergraduate Dissertation Supervisor;
- Programme Leader;
- Personal Tutor

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

Classroom-Based Duration and Cost:	
Classroom-Based Duration:	20 Days
Classroom-Based Cost:	£20,000.00 Per Delegate
Online (Video-Enhanced) Duration and Cost	
Online Duration:	40 Days – 3 Hours Per Day
Online Cost:	£13,400.00 Per Delegate


Classroom-Based Course and 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;**

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- **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.**

Customised Power Generator and Transformer Configuration, Installation, Operation, Maintenance and Repair Course

Leading to Diploma – Postgraduate – in Installation, Maintenance and Repair of Power Generators and Transformers (Quad Credit) and 120 Credit-Hours, Accumulating to a Postgraduate Certificate, with 60 Additional Credit-Hours, or a Postgraduate Diploma, with 240 Additional Credit-Hours

Course Contents, Concepts and Issues

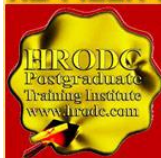
Module 1 Power Generator Configuration, Installation, Operation, Maintenance and Repair

Module 1: Part 1 - Generator Selection and Installation (1)

- Selecting the Right Generator
 - Power Outages;
 - What's available;
 - Generator Power Output;
 - Generator Power Quality:
 - ✚ Generator Voltage;
 - ✚ Power Frequency;
 - ✚ Power Distortion.
 - Engines or Prime Movers;
 - Fuel Options;
 - Other features worth having:
 - ✚ Instrumentation;
 - ✚ Circuit breakers;
 - ✚ Ground-fault circuit interrupters;
 - ✚ Automatic idle control;

Power Generator and Transformer Configuration, Installation, Operation, Maintenance and Repair - Page 6 of 29

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- + Noise;
- + Sizing.

Module 1: Part 2 - Generator Selection and Installation (2)

➤ Powering Up:

- Location;
- Hookup:
 - + Power cords;
 - + Power inlet box;
 - + Transfer switches;
 - + Transfer switches and neutral grounds;
- Electrical Safety:
 - + Grounding rods.
- Fuels:
 - + Gasoline;
 - + Propane;
 - + Natural gas;
 - + Diesel.
- Planning Ahead.

Module 1: Part 3 – Generator Functionality and Repair (1)

➤ Generator Repair:

- Conventional generators;
 - + Brushed generators;
 - + Brushless generators;
 - + Power quality;
 - + Tools;
 - + Measurements;
 - + Output tests;
 - + Resistance tests;

- ✚ Ohmmeter tests;
- ✚ Mega-ohmmeter tests;
- ✚ Rotor excitation test;
- Inverter generators:
 - ✚ Operation;
 - ✚ Troubleshooting.

Module 1: Part 4 – Generator Functionality and Repair (2)

- Engine Electrical Functionality:
 - Engine Management Controls;
 - ✚ Power sources;
 - ✚ Fuel cutoff valves;
 - ✚ Idle control;
 - ✚ Automatic choke;
 - ✚ Oil-pressure sensor;
 - ✚ Oil-level sensor;
 - Solid State Ignition;
 - ✚ Ignition myths.
 - Starter Motors.
- Emergency Repairs:
 - Tools and supplies;
 - No power:
 - ✚ No power from any receptacle;
 - ✚ No power from one receptacle.
 - Genset Slows Under Load;
 - Storage Batteries;
 - Gasoline Engine Malfunctions;
 - ✚ Preliminaries;
 - ✚ No start.
 - Loss of Power as Engine Warms;
 - Sudden Shutdowns;

- Insufficient Power;
- Weak Compression;
- Diesel Engine Malfunctions:
 - ✚ No or slow starting;
 - ✚ Runaway.

Module 1: Part 5 – Generator Functionality and Repair (3)

➤ Generator Fuel Systems:

- Generator Carburetor Standard and Operation;
- Generator Fuel System Tools and Supplies;
- Generator Fuel System Parts and materials.
- Generator Removal and Installation;
- Generator Fuel System Cleaning;
- Generator Float Carburetor Service;
 - ✚ Carburetor Needle and seat;
 - ✚ Carburetor Float adjustments;
 - ✚ Carburetor Jets;
 - ✚ Carburetor Primer;
- Diaphragm Carburetor Service:
 - ✚ Diaphragm Carburetor Operation;
 - ✚ Diaphragm Carburetor Plumbing;
 - ✚ Diaphragm Carburetor Troubleshooting;
 - ✚ Diaphragm Carburetor Pressure Test;
 - ✚ Diaphragm Carburetor Mixture-adjustment screws;
 - ✚ Diaphragm Carburetor Fuel pumps;
 - ✚ Diaphragm Carburetor Metering;
 - ✚ Diaphragm Carburetor Idle circuits;
 - ✚ Diaphragm Carburetor Check valves;
 - ✚ Diaphragm Carburetor Final pressure check;
 - ✚ Diaphragm Carburetor Mixture adjustments: all carburetors.

- Fuel Injection;
- Diesel:
 - ✚ Diesel Wet stacking;
 - ✚ Diesel Safety;
 - ✚ Diesel Tools;
 - ✚ Diesel Fuel system checks;
 - ✚ Diesel Injectors;
 - ✚ Diesel High-pressure pump;
 - ✚ Diesel Timing.

Module 1: Part 6 – Major Generator Engine Repair (1)

- Pertinent Issues in Generator Engine Repair;
- What's needed for Generator Engine Repair;
- Torque Limits in Generator Engine Repair;
- Evaluation of Generator Engine Repair;
- Excessive Generator Engine Compression During Repair;
- Minimal Compression in Generator Engine Repair;
- Compression Test in Generator Engine Repair;
- Leak-Down Test;
 - Leak Down Test-Four-Cycle Generator Engine;
 - Leak Down Test-Two-Cycle Generator Engine.
- Blowby Gauge;
- Cylinder Head Casting;
- Valves;
- Valve Guides;
- Valve Springs;
- Pushrods;
- Pistons;
- Rings: Installation;
- Piston Installation:
 - Integral Bores;

- Detachable Cylinders.

Module 1: Part 7 – Major Generator Engine Repair (2)

- Connecting Rods;
 - Construction;
 - Orientation;
 - Bearings;
 - Micrometers;
 - Plastigage;
 - Failure analysis;
 - Rod assembly.
- Cylinders:
 - Cylinder Glaze breaking;
 - Cylinder Inspection;
 - Cylinder Boring;
 - Cylinder Sleeving.
- Flywheel;
- Crankcase;
- Crankshafts;
- Antifriction main bearings;
- Camshafts;
- Balance Shafts;
- Oil Seals;
- Oil Circuits;
- Rewind starters:
 - Starter Troubleshooting;
 - Preload release and restoration;
 - Brake Dogs;
 - Recoil Springs

Module 1: Part 8 - Generator Design and Construction

- Stator Core;
- Stator Frame;
- Flux and Armature Reaction;
- Electromagnetics;
- End-region Effects and Flux Shielding;
- Stator Core and Frame Forces;
- Stator Windings;
- Stator Winding Wedges;
- End-Winding Support Systems;
- Stator Winding Configurations;
- Stator Terminal Connections;
- Rotor Forging;
- Rotor Winding;
- Rotor Winding Slot Wedges;
- Amortisseur Winding;
- Retaining Rings;
- Bore Copper and Terminal Connectors
- Slip/Collector Rings and Brush Gear;
- Rotor Shrink Coupling;
- Rotor Turning Gear;
- Bearings;
- Air and Hydrogen Cooling;
- Rotor Fans;
- Hydrogen Containment;
- Hydrogen Coolers.

Module 1: Part 9 - Generator Auxiliary Systems, Operation, Control and Diagnostics

Generator Auxiliary Systems

- Lube-Oil System;
- Hydrogen Cooling System;
- Seal-Oil System;
- Stator Cooling Water System;
- Exciter Systems.

Generator Operation and Control

- Basic Operating Parameters;
- Operating Modes;
- Machine Curves;
- Special Operating Conditions;
- Basic Operation Concepts;
- System Considerations;
- Grid-Induced Torsional Vibrations;
- Excitation and Voltage Regulation;
- Performance Curves;
- Sample of Generator Operating Instructions.

Generator Operational Monitoring and Diagnostics

- Generator Monitoring Philosophies;
- Simple Monitoring with Static High-Level Alarm Limits
- Dynamic Monitoring with Load-Varying Alarm Limits;
- Artificial Intelligence Diagnostic Systems;
- Monitored Parameters.

Generator Protection

- Basic Protection Philosophy;
- Generator Protective Functions;
- Brief Description of Protective Functions;
- Specialized Protection Schemes;
- Tripping and Alarming Methods.

Module 1: Part 10 – Generator Inspection, Maintenance, and Testing (1)

Generator Inspection Practices and Methodology

- Site Preparation;
- Experience and Training;
- Safety Procedures – Electrical Clearances;
- Inspection Frequency;
- Generator Accessibility;
- Inspection Tools;
- Inspection Forms.

Generator Stator Inspection

- Stator Frame and Casing;
- Stator Core;
- Stator Windings;
- Phase Connectors and Terminals;
- Hydrogen Coolers.

Module 1: Part 11 – Generator Inspection, Maintenance, and Testing (2)

Generator Rotor Inspection

- Rotor Cleanliness;
- Retaining Rings;
- Fretting/Movement at Interference Fit Surfaces of Wedges and Rings;

- Centering (Balance) Rings;
- Fan Rings or Hubs;
- Fan Blades;
- Bearings and Journals;
- Balance Weights and Bolts;
- End Wedges and Damper Windings;
- Other Wedges;
- Windings – General;
- Windings – Slot Region;
- End Windings and Main Lead;
- Collector Rings;
- Collector Ring Insulation;
- Bore Copper and Radial (Vertical) Terminal Stud Connectors;
- Brush-Spring Pressure and General Condition;
- Brush Rigging;
- Shaft Voltage Discharge (Grounding) Brushes;
- Rotor Winding Main Lead Hydrogen Sealing – Inner and Outer;
- Circumferential Pole Slots (Body Flex Slots);
- Blocked Rotor Radial Vent Holes – Shifting of Winding and or/ Insulation;
- Couplings and Coupling Bolts;
- Bearing Insulation;
- Hydrogen Seals;
- Rotor-Body Zone Rings;
- Rotor Removal.

Module 1: Part 12 – Generator Inspection, Maintenance, and Testing (3)

Auxiliaries Inspection

- Lube-Oil System;
- Hydrogen Cooling System;
- Seal-Oil System;
- Stator Cooling Water System;

- Exciters.

Generator Maintenance Testing

- Stator Core Mechanical Tests;
- Stator Core Electrical Tests;
- Stator Winding Mechanical Tests;
- Water-Cooled Stator Winding Tests;
- Stator Winding Electrical Tests;
- Rotor Mechanical Tests;
- Rotor Electrical Testing;
- Hydrogen Seals;
- Bearings;
- Thermal Sensitivity Testing and Analysis;
- Heat Run Testing;
- Hydrogen Leak Detection.

Generator Maintenance

- General Maintenance Philosophies;
- Operational and Maintenance History;
- Maintenance Intervals/Frequency;
- Type of Maintenance;
- Work Site Location;
- Workforce;
- Spare Parts;
- Uprating;
- Long-Term Storage and Mothballing;
- Life Cycle Management (LCM).

Module 2

Electric Transformer Configuration, Installation, Operation, Maintenance and Repair

Module 2: Part 1 - Guidelines for Transformer Application Designs (1)

- Selection Process;
 - Application of the unit;
 - Choice of insulation (liquid-filled or dry type):
 - Choice of winding material (copper and aluminum);
 - Possible use of low-loss core material;
 - Regulation (voltage stability);
 - Life expectancy;
 - Any overloading requirements;
 - Basic insulation level (BIL);
 - Temperature considerations;
 - Losses (both no-load and operating losses);
 - Any non-linear load demand;
 - Shielding; and
 - Accessories.

Module 2: Part 2 - Guidelines for Transformer Application Designs (2)

- Two Types of Transformers:
 - Liquid filled transformers;
 - Dry type transformers.
- Dry Type Transformers Classification:
 - Ventilated;
 - Non-ventilated;
 - Sealed units.
- Cooling and Insulating System;

- Power Transformers Construction – Core;
- Difference between Power Transformer and Distribution Transformer;
- Network Distribution Transformers – Serving Grid and Spot Networks.

Module 2: Part 3 – Maintenance and Analysis of Power Transformers (1)

- Maintenance and lines and bus bar inspection;
- Preventive Maintenance Program;
- Periodicity of the inspections;
- Maintenance procedures for the insulating oil;
 - Deterioration of the insulating oil;
 - Preventing the deterioration of the oil;
 - Evaluation of the deterioration of dielectric oil.
- Analyzing Transformer Insulating Fluid:
 - Why test insulating fluid?;
 - How is testing done?
 - ✚ Transformer Insulating Fluid Dielectric breakdown;
 - ✚ Transformer Insulating Fluid Neutralization number;
 - ✚ Transformer Insulating Fluid Interfacial tension;
 - ✚ Transformer Insulating Fluid Special gravity;
 - ✚ Transformer Insulating Fluid Water content;
 - ✚ Transformer Insulating Fluid Color;
 - ✚ Transformer Insulating Fluid Visual examination;
 - ✚ Transformer Insulating Fluid Power factor;
 - ✚ Transformer Insulating Fluid Flash point;
 - ✚ Transformer Insulating Fluid Pour point;
 - ✚ Transformer Insulating Fluid Corrosive sulfur;
 - ✚ Transformer Insulating Fluid Viscosity;
 - ✚ Transformer Insulating Fluid Dissolved gas analysis.

Module 2: Part 4 – Maintenance and Analysis of Power Transformers (2)

- Maintenance and inspection of the bushings;
 - Routine inspection bushings;
 - Regular inspection bushings;
 - Inspection due to excessive partial heating bushings;
 - Local damages inspection (fissures) on the bushings;
 - Inspection for oil leaks in bushings;
 - Storage of bushings.
- Maintenance and inspection of the cooling equipment;
 - Self – cooling type radiator.
- Maintenance and inspection of the thermometers;
 - Dial type thermometer.
- Maintenance and inspection of oil level gauge;
 - Oil level gauge dial type.
- Maintenance and inspection of the buchholz relay;
- Maintenance and inspection of the overpressure valves;
- Maintenance and inspection of the silica gel breathers;
- Maintenance and inspection of gaskets:
 - Installation of gaskets;
 - Methods of joining or connecting gaskets;
 - Work instructions.
- How to detect a leak?;
- Failures and countermeasures;
 - Causes of the failure;
 - Types of failures;
 - Discovery of the failures;
 - Internal defects of the transformer;
 - How to detect internal failures?

Module 2: Part 5 – Maintenance and Analysis of Power Transformers (3)

➤ Transformer Maintenance:

- Importance in variations of sound level in transformers;
- Evaluating tank heating of Transformers;
- Significance of liquid level in Transformers;
- Oil temperature of Transformers;
- Performing oil tests on Transformers;
- Gas-in-oil analysis for Transformers;
- Insulation resistance measurements for Transformers;
- Meaning of changes in power factor of Transformers.

➤ Maintenance Guidelines:

- Routine checks and resultant maintenance;
- Dust accumulation;
- Checks during deenergization;
- Checks with transformer energized;
- Periodic tests;
- IR Testing;
- Acceptance Testing.

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.

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;

- 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

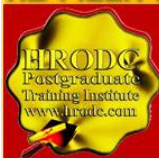
achieved, within the designated period. These Credit-Values, awards and their accumulation are exemplified below.

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

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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;**

- 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;**

55. Postgraduate Certificate n 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.

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