

HRODC Postgraduate Training Institute



A Postgraduate - Only Institution



#127

Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering

Postgraduate Short Course

Leading To:

DIPLOMA - POSTGRADUATE IN

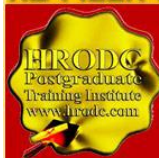
**Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering
Quad Credit, 120 Credit-Hours**

Accumulating to A

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

Postgraduate Diploma, With 240 Additional Credit-Hours

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.



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

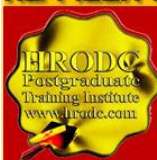
Course Coordinator:

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

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

- Personal Tutor

For Whom This Course is Designed

This Course is Designed For:

- HVAC Technicians;
- HVAC Consultants;
- HVAC Contractors;
- HVAC Designers;
- HVAC Service Supervisors;
- HVAC Assistants;
- HVAC Mechanics;
- HVAC Lecturers;
- Electrical Engineers;
- Mechanical Engineers;
- HVAC Maintenance and Operations Personnel;
- Project Managers;
- Project Engineers;
- Foremen;
- Master Electricians;
- Maintenance Technicians;
- Operation Managers;
- Others who want to gain better understanding of heating, ventilations and air-conditioning system design.

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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.

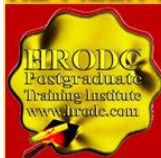
Students and Delegates will be given a Selection of our Complimentary Products, which include:

- **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;**
- **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.

Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering Course - Page 5 of 29

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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.

Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering		
Leading to Diploma-Postgraduate in Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering (Quad Credit)		
Number	Module Title	Credit
127.M1	Fundamentals of Heating, Ventilation and Air-Conditioning (HVAC)	Single
127.M2	Heating, Ventilation and Air-Conditioning (HVAC): Engineering Design, Procedures , and Air and Temperatures Control	Single
127.M3	Heating, Ventilation and Air-Conditioning (HVAC): Engineering Design, Drawing, Specification, Thermodynamics, Psychodynamics, Sound, Vibration and Smoke Management	Double

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Leading to Diploma – Postgraduate – in Heating, Ventilation and Air-Conditioning (HVAC): System Design and Value Engineering 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

Module 1 Fundamentals of Heating, Ventilation and Air-Conditioning (HVAC)

Module Objectives

By the conclusion of the specified learning and development activities, delegates will be able to:

- Demonstrate an understanding of the different HVAC equations;
- Solve problems encountered in HVAC process;
- Exhibit an understanding of the relationship between value engineering and HVAC system design;
- Be familiar with the provisions of some codes, regulations and standards governing HVAC;
- Explain the concept of fluid mechanics, thermodynamics, heat transfer, psychometrics, and sound and vibration;
- Determine ways of conserving energy through HVAC system design;
- Explain and describe the HVAC Cycles;
- Enumerate the different control strategies;
- Name some of the architectural, structural and electrical considerations;
- Demonstrate their competence in interpreting and making conceptual design;
- Specify the environmental criteria for typical buildings;

- Suggest the most effective ways of engaging in designing operation and maintenance of HVAC;
- Explain the steps in regeneration cycles;
- Identify the different cooling equipment;
- Distinguish between radiant cooling and evaporative cooling;
- Determine the functions of refrigerants;
- Identify the different heating equipment;
- Demonstrate familiarity with the boiler codes and standards;
- Devise a boiler design for specific scenario;
- Conduct some acceptance and operational testing;
- Distinguish between direct- and indirect-fired heating equipment;
- Name the types of heat exchangers;
- Acquire overall perspective of AHU systems arrangements;
- Specify the various terminal units;
- Explain the concept of individual room AHUs;
- Cite some effects of altitude;
- Explain how the exhaust systems works;
- Determine the most appropriate methods of smoke control, relevant to particular situation.

Module Contents, Concepts and Issues

M.1 Part 1: HVAC Engineering Equations for Daily Use

- Frequently Used HVAC Equations:
 - Air Side Equations;
 - Fan Laws;
 - Heat Transfer Equations;
 - Fluid Handling;
 - Power and Energy;
 - Steam Equations.
- Infrequently used HVAC Equations:

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- Air Side Equations;
- Fluid Handling;
- Smoke Management.

M.1 Part 2: HVAC Engineering Fundamentals (1)

- Problem Solving;
- Value Engineering;
- Codes, Regulations and Standards;
- Fluid Mechanics;
- Thermodynamics;
- Heat Transfer;
- Psychometrics;
- Sound and Vibration;
- Energy and Conservation.

M.1 Part 3: HVAC Engineering Fundamentals (2)

- Comfort;
- HVAC Cycles;
- Control Strategies;
- Architectural, Structural and Electrical Considerations;
- Conceptual Design;
- Environmental Criteria for Typical Buildings;
- Designing for Operation and Maintenance;
- Codes and Standards.

M.1 Part 4: Equipment: Cooling

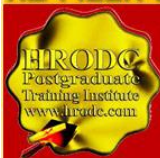
- Regeneration Cycles;
- Compressors;
- Chillers;
- Condensers;
- Cooling Towers;
- Cooling Coils;
- Radiant Cooling;
- Evaporative Cooling;
- Refrigerants.

M.1 Part 5: Equipment: Heating

- General;
- Boilers;
- Boiler Types;
- Combustion Processes and Fuels;
- Fuel-Burning Equipment;
- Boiler Feedwater and Water Treatment Systems;
- Boiler Codes and Standards;
- Boiler Design;
- Acceptance and Operational Testing;
- Direct- and Indirect-Fired Heating Equipment;
- Heat Exchangers – Water Heating;
- Heat Exchangers – Air Heating;
- Unit Heaters and Duct Heaters;
- Terminal Heating Equipment;
- Heat Pumps;
- Heat Recovery and Reclaim;
- Solar Heating;

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- Humidification.

M.1 Part 6: Equipment: Air-Handling Systems

- AHU Systems Arrangements;
- Package AHUs;
- Built-Up (Field-Assembled) AHU;
- Terminal Units;
- Individual Room AHUs;
- Humidity Control;
- Control of Outside Air Quantity;
- Effects of Altitude;
- Exhaust Systems;
- Smoke Control.

Module 2 Heating, Ventilation and Air-Conditioning (HVAC): Engineering Design, Procedures, and Air and Temperature Controls

Module Objectives

By the conclusion of the specified learning and development activities, delegates will be able to:

- Make a load calculation design using the computer;
- Apply the rule of thumb calculations;
- Design criteria and documentation forms;
- Enumerate the factors for load components;
- Elucidate the underlying principles of load calculations;
- Distinguish dynamic and static load calculations;

- Exhibit a heightened understanding on ventilation loads;
- Develop a clear understanding on the general concepts of equipment selection;
- Specify the necessary criteria for system and equipment selection;
- Cite the options in system and equipment selection;
- Interpret the psychometric chart;
- Cite the effects of latitude and temperature;
- Describe the software-based equipment selection;
- Be familiar with the air duct design;
- Learn the concept of louvers, dampers and filters;
- Gain knowledge about air distribution with high flow rates;
- Ascertain how noise control is done;
- Indicate the role of Indoor Air Quality as it provides health and comfort to the building occupants;
- Demonstrate an understanding of the concept of steam, water, pumps and high-temperature water in the fluid handling system;
- Enumerate the secondary coolants;
- Explain the Piping Systems;
- Demonstrate an understanding of the general plant design concept;
- Exhibit a high level of competency in designing central steam plants;
- Distinguish between low-temperature hot water central plants and high-temperature hot water central plants;
- Enumerate the different fuel options and alternative fuels;
- Demonstrate a high level of competency in designing cogeneration plants;
- Specify the different control devices;
- Explain the typical control systems;
- Describe with accuracy the electrical interfaces;
- Acquire knowledge about computer-based control;
- Determine the different control symbols;

Module Contents, Concepts and Issues

M.2 Part 1: Design Procedures: Load Calculations

- Use of Computers;
- Rule of Thumb Calculations;
- Design Criteria and Documentation Forms;
- Factors for Load Components;
- Load Calculations;
- Dynamic versus Static load Calculations;
- Ventilation Loads;
- Other Loads.

M.2 Part 2: Design Procedures: General Concepts for Equipment Selection

- Sustainable System and Equipment;
- Maintainability of Systems and Equipment;
- Criteria for System and Equipment Selection;
- Options in System and Equipment Selection;
- The Psychometric Chart;
- Effects of Latitude and Temperature;
- Software-Based Equipment Selection.

M.2 Part 3: Design Procedures: Air Handling System

- Fans;
- Air Duct Design;
- Registers and grilles;
- Louvers;
- Dampers;
- Filters;
- Air Distribution with High Flow Rates;
- Stratification;
- Noise Control;
- Indoor Air Quality.

M.2 Part 4: Design Procedures: Fluid Handling Systems

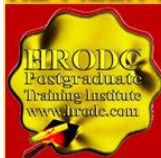
- Steam;
- Water;
- High-Temperature Water;
- Secondary Coolants;
- Piping Systems;
- Pumps;
- Refrigerant Distribution.

M.2 Part 5: Design Procedures: Central Plants

- General Plant Design Concept;
- Central Steam Plants;
- Low-Temperature Hot Water Central Plants;
- High-Temperature Hot Water Central Plants;
- Fuel Options and Alternative Fuels;
- Central Chilled Water Plants;

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- Thermal Storage System;
- Central Plant Distribution Arrangements;
- Cogeneration Plants.

M.2 Part 6: Design Procedures: Automatic Controls

- Control Fundamentals;
- Control Devices;
- Instrumentation;
- Typical Control Systems;
- Electrical Interfaces;
- Computer-Based Control;
- Control Symbols.

Module 3 Heating, Ventilation and Air-Conditioning (HVAC): Engineering Design, Drawing, Specification, Thermodynamics, Psychodynamics, Sound, Vibration and Smoke Management

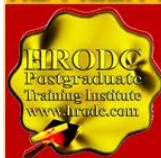
Module Objectives

By the conclusion of the specified learning and development activities, delegates will be able to:

- Demonstrate an understanding of the fundamentals of electric power;
- Explain the common service voltages;
- Explain the concept of power factor, using the appropriate examples;
- Be familiar with the different types of motors;
- Recognise the different variable speed drives;
- Be acquainted with the principles of Uninterruptible Power Supply (UPS);
- Explicate the concept of standby power generation;
- Explain the most appropriate electrical room ventilation structure;

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- Develop a good lighting systems;
- Learn some provision of National Electrical Code;
- Identify the nature of contracts;
- Explain the drawings and specifications involve in the design process;
- Exhibit a high level of know the different participation during construction;
- Demonstrate an understanding of the process of commissioning;
- Organise and write a Report, with great clarity;
- Use of Tables and Figures;
- Be skilled in printing and binding;
- Prepare letter reports;
- Define different terminologies in fluid mechanics;
- Explain the law of conservation of mass;
- Elucidate the Bernoulli equation;
- Be knowledgeable about flow volume measurement;
- Be familiar with some thermodynamic terms;
- Distinguish the first and second law of thermodynamics;
- Explain the concept of efficiency in relation to thermodynamics;
- Understand the concept of coefficient of performance;
- Enumerate the different heat transfer modes;
- Explain the concept of thermal conduction, convection and radiation;
- Describe the latent heat moisture;
- Cite the different thermodynamic properties of moist air;
- Understand the tables of properties;
- Interpret psychometric charts;
- Determine the various HVAC processes on the psychometric chart;
- Have a grasp on the protractor on the ASHRAE psychometric chart;
- Identify the several effects of altitude;
- Enumerate the different methods of specifying and measuring sound;
- Understand sound and vibration transmission;
- Determine the goals of ambient sound level design;
- Learn how to reduce sound and vibration transmission;
- Learn the basics of IAQ;

- Specify the different methods of providing acceptable IAQ;
- Cite the different design considerations for acceptable IAQ;
- Enumerate some ways of protecting outside air intakes;
- Establish the relationship between IAQ and energy conservation;
- Specify the various HVAC sustainable design approaches;
- Learn the concept of energy-efficiency compliance and indoor air quality compliance;
- Develop a heightened understanding in bridging the gap between energy efficiencies and IAQ requirement;
- Understand the basic statements, codes, definitions and design guides for smoke management systems;
- Demonstrate a high level of knowledge of the atrium and mall smoke management design requirements;
- Be aware of the principle of zoned smoke management system;
- Cite the step-by-step design procedure for zoned smoke control;
- Give examples of zoned smoke management calculation;
- Conduct implementation and performance testing;
- Perform zoned smoke control systems test;
- Observe the necessary precautions in doing smoke machine or smoke bomb testing.

Module Contents, Concepts and Issues

M.3 Part 1: Electrical Features of HVAC Systems

- Fundamentals of Electric Power;
- Common Service Voltages;
- Power Factor;
- Motors;
- Variable Speed drives;
- Electrical Interface;
- Uninterruptible Power Supply (UPS);
- Standby Power Generation;

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- Electrical Room Ventilation;
- Lighting Systems;
- National Electrical Code.

M.3 Part 2: Design, Documentations: Drawings and Specification

- The Nature of Contracts;
- Drawings;
- Specifications.

M.3 Part 3: After Design: Through Construction to Operation

- Participation during Construction;
- Commissioning.

M.3 Part 4: Technical Report Writing

- Organization of a Report;
- Writing with Clarity;
- Use of Tables and Figures;
- Printing and Binding;
- Letter Reports.

M.3 Part 5: Engineering Fundamentals: Fluid Mechanics

- Terminology in Fluid Mechanics;
- Law of Conservation of Mass;
- The Bernoulli Equation;
- Flow Volume Measurement.

M.3 Part 6: Engineering Fundamentals: Thermodynamics

- Thermodynamic Terms;
- First law of Thermodynamics;
- Second law of Thermodynamics;
- Efficiency;
- Coefficient of Performance;
- Specific Heat C.

M.3 Part 7: Engineering Fundamentals: Heat Transfer

- Heat Transfer Modes;
- Thermal Conduction;
- Thermal Convection;
- Thermal Radiation;
- Latent Heat Moisture.

M.3 Part 8: Engineering Fundamentals: Psychometrics

- Thermodynamic Properties of Moist Air;
- Tables of Properties;
- Psychometric Charts;
- HVAC Processes on the Psychometric Chart;
- The Protractor on the ASHRAE psychometric Chart;
- Effects of Altitude.

M.3 Part 9: Engineering Fundamentals: Sound and Vibration

- Definitions;
- Methods of Specifying and Measuring Sound;
- Sound and Vibration Transmission;
- Ambient Sound Level Design Goals;

- Reducing Sound and Vibration Transmission.

M.3 Part 10: Engineering Fundamentals: Sound and Vibration

- Basics of IAQ;
- Methods of Providing Acceptable IAQ;
- Design Considerations for Acceptable IAQ;
- Additional Design Considerations for Acceptable IAQ;
- Protection of Outside Air Intakes;
- IAQ and Energy Conservation.

M.3 Part 11: Sustainable HVAC Systems

- Energy-Efficient “Green” Buildings;
- HVAC Sustainable Design Approaches;
- Energy-Efficiency Compliance;
- Indoor Air Quality Compliance;
- Bridging the Gap between Energy Efficiencies and IAQ Requirements.

M.3 Part 12: Smoke Management

- Basic Statements, Codes, Definitions and Design Guides for Smoke Management Systems;
- Atrium and Mall Smoke Management Design Requirements;
- Zoned Smoke Management System;
- Design procedure for Zoned Smoke Control;
- Zoned Smoke Management Calculation Example;
- Implementation and Performance Testing;
- Testing of Zoned Smoke Control Systems;
- Note of Caution on Smoke Machine or Smoke Bomb 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;

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- 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

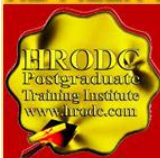
All short courses can accumulate to the required number of Credit-Hours, for the Postgraduate Certificate and Postgraduate Diploma, over a six-year period from first registration and applies to both general and specialist groupings. In this regard, it is important to note that short courses vary in length, 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

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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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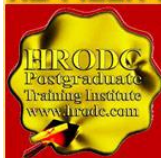


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1. **Postgraduate Diploma in Accounting and Finance;**
2. **Postgraduate Certificate in Accounting and Finance;**
3. **Postgraduate Certificate in Aviation Management;**
4. **Postgraduate Diploma in Aviation Management;**
5. **Postgraduate Certificate 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;**

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- 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;**

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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.

Service Contract, incorporating Terms and Conditions

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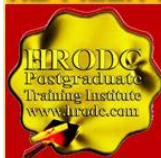
The submission of our application form or otherwise registration by of the submission of a course booking form or e-mail booking request is an attestation of the candidate's subscription to our Policy Terms and Conditions, which are legally binding.

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