

# **HRODC Postgraduate Training Institute**

**A Postgraduate - Only Institution**



**#245.M1**

**Temperature Measurement and Calibration of Measuring Instruments and Calibrators, for Legal, Dynamic and Deterministic Metrology**

**Postgraduate Short Course**

**Leading To:**

**DIPLOMA - POSTGRADUATE IN**

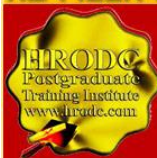
**Temperature Measurement and Calibration of Measuring Instruments and Calibrators, for Legal, Dynamic and Deterministic Metrology, Double Credit, 72 Credit-Hours**

**Accumulating to A**

**Postgraduate Certificate, With 108 Additional Credit-Hours, or A**

**Postgraduate Diploma, With 288 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.



**HRODC POSTGRADUATE TRAINING INSTITUTE**  
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**Websites:**  
<https://www.hrodc.com/>  
<https://www.hrodc.london/postgraduateshortcourses.com/>

**Email:**  
[institute@hrodc.com](mailto:institute@hrodc.com)  
[london@hrodc.com](mailto:london@hrodc.com)

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

**Tel:**  
+44 1902 763 607  
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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

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


- Metrologists;
- Quality Engineers and Technicians;
- Quality Managers;
- Quality Control Inspectors;
- Testers;
- Engineering Managers;
- Manufacturing Engineers;
- Machinists;
- Machine Operators;
- Measurement Specialists;
- Technology Educators;
- Instrumentation and Control Engineers;
- Anyone who requires instruction in measurement;
- All those interested in Metrology.

<b>Classroom-Based Duration and Cost:</b>	
<b>Classroom-Based Duration:</b>	<b>12 Days</b>
<b>Classroom-Based Cost:</b>	<b>£12,000.00 Per Delegate</b>
<b>Online (Video-Enhanced) Duration and Cost</b>	
<b>Online Duration:</b>	<b>24 Days – 3 Hours Per Day</b>
<b>Online Cost:</b>	<b>£8,040.00 Per Delegate</b>

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## 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.**

### 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.**

## **Temperature Measurement and Calibration of Measuring Instruments and Calibrators, for Legal, Dynamic and Deterministic Metrology Course**

**Leading to Diploma – Postgraduate – in Temperature Measurement and Calibration of Measuring Instruments and Calibrators, for Legal, Dynamic and Deterministic Metrology (Double Credit) and 72 Credit-Hours, Accumulating to a Postgraduate Certificate, with 108 Additional Credit-Hours, or a Postgraduate Diploma, with 288 Additional Credit-Hours**

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

#### **Part 1 - Salient Calibration Issues for Metrology**

- Calibration of Measurement and Test Equipment;
- Recalibration or Calibration Intervals;
- Recalibration or Calibration Intervals Requirement;
- Sealing Adjusting Mechanisms;
- Handling and Storage of Test Measuring Equipment;
- Managing Calibration Data;
- Documenting Calibration Result;
- Uncovering Out-of-Calibration State.

#### **Part 2 - Calibration of Dimensional Measuring Instruments (1)**

- Effect of Temperature;
- Deformation;
- Force Exerted by the Measuring Instrument;
- The Method of Support of the Test Item;
- Reference Conditions;
- Reference Standard;



- Calibration of Gauge Blocks;
- Calibration of Micrometres;
- Calibration of Vernier Callipers;
- Calibration of Dial Gauge;
- Calibration of Ring Gauges.

## Part 3 - Calibration of Dimensional Measuring Instruments (2)

### Angular Measurement

- SI and other Units;
- Angle Standards;
  - Plane Angle;
  - Sine Bar;
  - Indexing Table;
  - Precision Polygon;
  - Angle Gauge;
  - Autocollimator.

## Part 4 - Calibration of Mass Measuring Instruments

### Industrial Weighing Systems

- Mechanical Systems;
- Electrical Systems;
- Pneumatic Systems;
- Hydraulic Systems;
- Accuracy Classes of Balances.

### Calibration of Balances

- Precision Balances;
- Calibration of Direct Reading Electronic Precision Balances;

- Setting Scale Value;
- Repeatability;
- Linearity;
- Off-Centre Loading Effect;
- Hysteresis.

## Part 5 – Understanding Pressure Measuring Instruments

- Mercury Barometers;
- Fortin Barometer;
- Kew Pattern Barometer;
- Precautions for Handling of Mercury Barometers;
- U Tube Manometer;
- Mechanical Deformation Instruments;
- Bourdon Tube Gauge;
- Diaphragm Gauge;
- Piezo Electric Devices.
- Indirect Instruments;
- Thermal Conductivity Gauges;
- Ionization Gauge;
- Bayard Alpert Gauge;
- Penning Gauge.

## Part 6 - Calibrating Pressure Measuring Instruments

- Calibration of Pressure Standards and Instruments Reference Standard;
- Test Uncertainty Ratio;
- Reference Conditions;
- Local Gravity;
- Range of Calibration;
- Recalibration Interval;
- Pipework and Tubing;



- Pressure Medium;
- Instrument Adjustment;
- Calibration of Working Standard Dead Weight Pressure Testers;
- Cross Floating;
- Estimation of Uncertainty;
- Calibration of Vacuum Gauges.

## Part 7 - Calibrating Force Measurement and Test Instruments

- General Considerations;
- Reference Standard;
- Test Uncertainty Ratio;
- Reference Conditions;
- Range and Scope of Calibration;
- In Situ or Laboratory Calibration;
- Recalibration Interval;
- Verification of Tensile and Compressive Testing Machines;
- Documentary Standards;
- Reference Standard;
- Temperature Equalization;
- Conditioning of the Testing Machine;
- Application of Test Forces;
- Data Analysis;
- Classes of Testing Machine Range.

## Part 8 - Calibrating Multi-Function Measuring Instruments and Multi-Function Calibrators

- Verification of Calibrator;
- Adjustment of Calibrator;
- Calibration of Multimeters and Other Instruments;
- Analogue Multimeters;
- Types of Digital Multimeters;
- Handheld Type;
- Bench Type;
- Laboratory Type;
- General Calibration Techniques;
- DC Voltage Range;
- AC-DC Converter;
- Resistance Converter Calibration;
- Calibration of Current Converters;
- Calibration of a Multifunction Calibrator;
- Calibration of Multimeters and other Instruments;
- Types of Digital Multimeters.

## Part 9 - Temperature Measurement Principles

- Thermistors and their Function;
- The Principles of Thermistors as Temperature Sensors;
- Practical Applications of Thermistors;
- Temperature Measurement as an Issue for Metrologists;
- SI and Units;
- Primary Standards;
- Secondary Standards;
- Working Standards;
- The International Temperature Scale - 1990 (ITS-90);

- Thermometers and Thermocouples as Temperature Measuring Devices;
- Differences between Thermometers and Thermocouples;
- Temperature-Sensitive Resistance Vs Voltage Generation;
- How are Readings from Thermometers Made?

## Part 10 - Calibration of Temperature Measuring Instruments

- Exploring Temperature Calibration;
- Multifunction Calibrator;
- Output Drift;
- Burden Current;
- Compliance Voltage;
- Protection;
- Output Noise;
- Process Calibrator;
- What is a Reference Thermometer or Standard Thermometer?
- Deconstructing Temperature Calibration;
- What is involved in Temperature Calibration
- Temperature Sensors and their Calibration;
- Platinum Resistant Thermometers (PRTs)
- PT100 Platinum Resistance Thermometers;
- Uncertainties Associated with Temperature Calibration;
- Using Temperature Reference Thermometers for Temperature Measuring Instrument Calibration;
- Using Temperature Reference Baths for Temperature Measuring Instrument Calibration.



## Part 11 - High-Precision Temperature Measuring Instrument Calibration: Field, Laboratory and Fixed-Point Temperature Calibration (1)

### Field Temperature Calibration

- Industrial or Portable Temperature Calibration;
- Thermometers Being Tested Outside of A Laboratory Environment,
- Aiming at Temperature Accuracies of 5 °C to 0.5 °C;
- Calibrating Using Dry-Wells;
- Calibrating with Metrology Wells;
- Using Micro-Baths;
- Using Ir Targets;
- Using Other Portable Heat Sources for Temperature Calibration;
- Using Portable Thermometer Readouts as Reference Temperatures;
- Using Thermometer Standards as Reference Temperatures;
- Comparing The Accuracy of Heat Sources With Portable Thermometer Readouts And Temperature Standards

## Part 12 - High-Precision Temperature Measuring Instrument Calibration: Field, Laboratory and Fixed-Point Temperature Calibration (2)

### Laboratory or Secondary Temperature Calibration:

- Calibration of Reference-Grade PRT or PT-100,
- Precision Thermistors,
- Noble-Metal Thermocouples.
- Ultra-stable Temperature Baths;
- Uniform Temperature
- Horizontal Furnaces (for the High Temperatures needed by Thermocouples);
- SPRT Reference Thermometers;
- high-accuracy thermometer readouts.
- Towards Temperature Calibration Accuracies of 0.5 °C to 0.02 °C.

## Part 13 - High-Precision Temperature Measuring Instrument Calibration: Field, Laboratory and Fixed-Point Temperature Calibration (3)

### Fixed-Point or Primary Temperature Calibration;

- Using Fixed-Point Cells for Temperature Calibration,
- Using Triple Point of Water,
- Using Standard Platinum Resistance Thermometer (SPRT) Calibrations
- National Institute of Standards and Technology (NIST) temperature Range Selection;
- Using Noble-Metal Thermocouples to 0.001 °C Calibration Accuracy
- Industrial Temperature Calibration
- Automatic Temperature Calibration;
- Industrial Temperature Calibration: Traceable Calibration
- Temperature Calibration Software.

## Part 14 - Uncertainty of Measurements

- Recommendations of the ISO Guide;
- Types of Evaluation;
- Expanded Uncertainty;
- Examples of Uncertainty Calculations;
- Estimation of Combined Standard Uncertainty;
- Effective Degrees of Freedom;
- Calculation of Uncertainty.

## 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 1<sup>st</sup> of each month, with the cut-off date being the 20<sup>th</sup> 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;

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- 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.

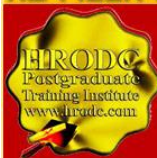
## **Cumulative Postgraduate Certificate and Postgraduate Diploma Courses**

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

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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.

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

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## **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 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;**

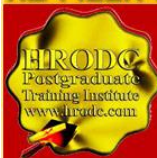
- 20. Postgraduate Diploma in Health and Safety Management;**
- 21. Postgraduate Certificate in Health Care Management;**
- 22. Postgraduate Diploma in Health Care Management;**
- 23. Postgraduate Certificate in Human Resource Development;**
- 24. Postgraduate Diploma in Human Resource Development;**
- 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 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.

**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.

## Service Contract, incorporating Terms and Conditions

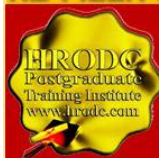
[Click, or copy and paste the URL, below, into your Web Browser, to view our Service Contract, incorporating Terms and Conditions.](https://www.hrodc.com/Service_Contract_Terms_and_Conditions_Service_Details_Delivery_Point_Period_Cancellations_Extinuating_Circumstances_Payment_Protocol_Location.htm)

[https://www.hrodc.com/Service\\_Contract\\_Terms\\_and\\_Conditions\\_Service\\_Details\\_Delivery\\_Point\\_Period\\_Cancellations\\_Extinuating\\_Circumstances\\_Payment\\_Protocol\\_Location.htm](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.

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**Director**  
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