

HRODC Postgraduate Training Institute

A Postgraduate-Only Institution

014

**Comprehensive Automotive Electrical, Electronic and Mechanical
Diagnostic, Maintenance and Repair**

Programme

Leading To:

DIPLOMA – POSTGRADUATE IN

**Automotive Electrical, Electronic and Mechanical Diagnostic,
Maintenance and Repair**

Progressing To *MSc*

**Automotive Electrical, Electronic and Mechanical Diagnostic,
Maintenance and Repair**

Programme Coordinator:

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

- Doctor of Philosophy {(PhD) (University of London)};
- MEd. Management (University of Bath);
- Advanced Dip. Science Teacher Ed. (University of Bristol);
- Postgraduate Certificate in Information Systems (University of West London, formerly Thames Valley University);
- Diploma in Doctoral Research Supervision, (University of Wolverhampton);
- Teaching Certificate;
- Fellow of the Institute of Management Specialists;
- Human Resources Specialist, of the Institute of Management Specialists;
- Member of Academy of Management (MAoM), within the following Management Disciplines:
 - 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.
- 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);
- Life Member of Malaysian Institute of Human Resource Management (LMIHRM);
- Member of ResearchGate Community;
- Member of Convocation, University of London;
- Professor HRODC Postgraduate Training Institute.

Prof. Crawford was an Academic at:

- University of London (UK);
- London South Bank University (UK);

- University of Greenwich (UK); and
- University of Wolverhampton (UK).

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

- Mechanics;
- Automotive Engineers;
- Automotive Technicians;
- Electrical Engineers;
- Drivers;
- All others desirous of enhancing their knowledge and expertise in Automotive Electrical, Electronic and Mechanical Diagnostic, Maintenance and Repair

Programme Duration:

- **Intensive Full-Time {3 Months (5 Days or 30 credit Hours Per Week)}**
- **Full-Time {6 Months (2 – 2.5 Days or 15 Credit Hours Per Week)}**

Cost:£45,000.00 Per Delegate

Please Note:

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

Cost includes:

- Free Continuous snacks throughout the Event Days;
- Free Hot Lunch on Event Days;
- Free City Tour;
- Free Stationery;
- Free On-site Internet Access;
- Postgraduate - Diploma-in **Automotive Electrical, Electronic and Mechanical Diagnostic, Maintenance and Repair**; or
- Certificate of Attendance and Participation – if unsuccessful on resit.

HRODC Postgraduate Training Institute's Complimentary Products include:

1. HRODC Postgraduate Training Institute's **Leather Conference Folder**;
2. HRODC Postgraduate Training Institute's **Leather Conference Ring Binder/ Writing Pad**;
3. HRODC Postgraduate Training Institute's **Key Ring/ Chain**;
4. HRODC Postgraduate Training Institute's **Leather Conference (Computer – Phone) Bag** – Black or Brown;
5. HRODC Postgraduate Training Institute's **8GB USB Flash Memory Drive**, with Course Material;
6. HRODC Postgraduate Training Institute's **Metal Pen**;
7. HRODC Postgraduate Training Institute's **Polo Shirt**.

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

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

Location: Central London and International Locations

Course Programme for Comprehensive Automotive Electrical, Electronic and Mechanical Diagnostic, Maintenance and Repair Leading to Postgraduate Diploma in Automotive Electrical, Electronic and Mechanical Diagnostic, Maintenance and Repair

Module Number	Module Title	Duration	Page #	Credit Value
014.M1	<u>Automotive Industry: Technical and Contextual Explorations Part 1</u>	2 Weeks (10 Days)	6	Double
014.M2	<u>Automotive Industry: Technical and Contextual Explorations Part 2</u>	2 Weeks (10 Days)	16	Double
014.M3	<u>Advanced Mechanical Engineering: Automotive Fault Diagnosis and Repair</u>	4 Weeks (20 Days)	26	Quad
014.M4	<u>Automotive Electrical Wiring</u>	2 Weeks (10 Days)	41	Double
014.M5	<u>Automotive Repair and Maintenance</u>	2 Weeks (10 Days)	44	Double

Programme Contents, Concepts and Issues

Module 1 (Double Credit)

Automotive Industry: Technical and Contextual Explorations Part 1

M1. Part 1: Engine Building

- Concept of Engine:
- Four-Stroke Cycle:
- Opening and Closing Valves:
- The Flywheel;
- Basic Engine Completed.

M1. Part 2: Design, Construction, Application of Engine Components

- The Engine Block;
- Cylinders;
- Pistons:
- Connecting Rods:

M1. Part 3: Classifying Engine and Identifying the Parts

- Cycle Classification;
- Valve Location Classifications:
- Combustion Chamber Design:
- Cylinder Classification:

M1. Part 4: Safety Lab Procedures: Avoiding Accidents

- Kinds of Accidents;
- How Accidents Happen;
- Effects of Accidents;
- Doing the Job Right.

M1. Part 5: Automotive Tools

- Tool Material;
- Tool Construction;

- Tool Handling And Storage;
- Types of Tools;
- Measuring Tools.

M1. Part 6: Engine Tests and Measurements

- Horsepower:
- Volumetric Efficiency;
- Engine Size, Displacement:
- Compression Ratio.

M1. Part 7: Electrical System Fundamentals

- Basic Electricity:
- Basic Automotive Electronics:

M1. Part 8: Ignition System

- Necessity of High Voltage;
- Primary Circuit:
- Secondary Circuit:
- Ignition Timing And Advance:

Module 2 (Double Credit)

Automotive Industry: Technical and Contextual Explorations Part 2

M2. Part 1: Computer Systems

- Computers on Modern Vehicles:
- Static Electricity:

M2. Part 2: Charging and Starting Systems

- Battery:
- Charging System:

M2. Part 3: Chassis Electrical (1)

- Chassis Wiring:
- Circuit Protection Devices;

- Vehicle Lights and Light Switches:

M2. Part 4: Chassis Electrical (2)

- Electric Gauges;
- Cruise Control:
- Air Bag Systems:

M2. Part 5: Axles and Drives

- Rear Wheel Drive Shafts:
- Constant Velocity (CV) Axles:
- Rear-Wheel Drive Axle Assemblies;

M2. Part 6: Brakes (1)

- Hydraulic Basics:
- Master Cylinder:
- Brake System Hydraulic Control Valves:

M2. Part 7: Brakes (2)

- Drum Brake Assembly:
- Power Brake Systems;
- Vacuum-Assisted Power Booster:

M2. Part 8: Suspension Systems

- The Need For A Suspension System:
- Suspension System Components:
- Springs:

Module 3 (Quad Credit)

Advanced Mechanical Engineering: Automotive Fault Diagnosis and Repair

M3. Part 1: Overview

- Understanding Diagnosis;

- Work Safety Practices;
- Diagnostic Terminology;
- Report Writing.

M3. Part 2: Techniques in Diagnosing (1)

- Overview;
- Diagnostic Process:

M3. Part 3: Techniques in Diagnosing (2)

- Electrical Diagnostic Techniques:
- Fault Codes:
- Sources of Data:

M3. Part 4: Automotive Tools and Equipment

- Basic Equipment:
- Oscilloscopes:
- Scanners:

Module 4 (Double Credit) Automotive Electrical Wiring

M4 - Part 1: Automotive Electrical Principles and Circuits

- Electrical Principles;
- High Current or Low Voltage;
- Ohm's Law;

M4. Part 2: Tools for Automotive Wiring

- Essential Tools for Auto Electrical Wiring;
- Using Test Lights;

M4. Part 3: Essentials of Automotive Wiring

- Essential Connections;

- Crimp-Style Connections;
- Using Crimping Tools;

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_Extinguishing_Circumstances_Payment_Protocol_Location.htm

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

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