HRODC Postgraduate Training Institute A Postgraduate - Only Institution



#201

Mining Engineering: Mining Practices, Physics, Chemistry, Mineral Rights, Safety, Mechanical Engineering and Deterministic Mineralogy

Programme

Leading To:

POSTGRADUATE DIPLOMA IN

Mining Engineering

Registered Office: 122A Bhylls Lane., Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK Registered in England No. 6088763. V.A.T. # 8958 765 38 Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc Res. (Uni WIv); 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.



HIRODOC POSTIGIRADUANTE TIRAUNING UNST

A Postgraduate - Only Institution

Websites:

https://www.hrodc.com/ https://www.hrodelondon postgraduateshortcourses.com/ Email:

> institute@hrodc.com london@hrodc.com

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

Tel +44 1902 763 607 +44 7736 147 507

HRODC Postgraduate Training Institute, A Postgraduate-Only Institution **Our UK Government's Verification and Registration**

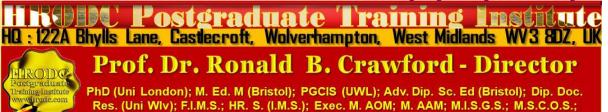
Our Institute is Verified by, and Registered with, the United Kingdom (UK) Register of Learning Providers (UKRLP), of the Department for Education (DfE). Its UK **Provider Reference Number (UKPRN) is:** 10019585 and might be located at: https://www.ukrlp.co.uk/.

Programme Coordinator:

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

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

Mining Engineering: Course - Page 2 of 61



M. RG. C.

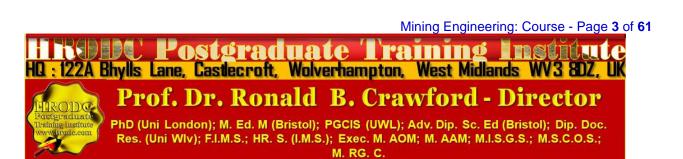
- Fellow of the Institute of Management Specialists;
- Human Resources Specialist, of the Institute of Management Specialists;
- Member of the Asian Academy of Management (MAAM);
- Member of the International Society of Gesture Studies (MISGS);
- Member of the Standing Council for Organisational Symbolism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

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

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

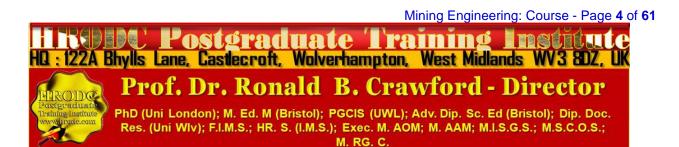
His responsibilities in these roles included:

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



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

- Chemists;
- Copper Mine Operators;
- Crane Operators;
- Geologists;
- Heavy Equipment Operators;
- Mechanical Engineers;
- Mine Logistics Operators;
- Mine Operators;
- Mineral Interest Owners;
- Mineral Rights Owners;
- Mineralogists;
- Mining Engineers;
- Mining Health and Safety Officers;
- Mining Investors;
- Mining Journeymen;
- Mining Project Managers;
- Mining Superintendents;
- Physicists;
- Potential Mining Investors;
- Surface Land Owners;
- Welders;
- All Others Who Are Desirous Of Acquiring Expertise In Mining Engineering And Related Issues.



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

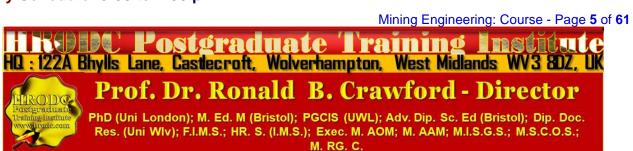
Classroom-Based Programme Cost includes:

- Free Continuous snacks throughout the Event Days;
- > Free Hot Lunch on Event Days;
- Free City Tour;
- Free Stationery;
- Free On-site Internet Access;
- Postgraduate Diploma/ Diploma Postgraduate –or
- ➤ Certificate of Attendance and Participation if unsuccessful on resit.

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

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

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



Delivery Locations:

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

Table of Contents

Mining Engineering: Mining Practices, Physics, Chemistry, Mineral Rights, Safety, Mechanical Engineering and Deterministic Mineralogy

Leading to Postgraduate Diploma in Mining Engineering

Loading to 1 obtgradate Diploma in imming Lingingering				
Module Number	Pre- existing Course #	Module Title	Page #	Credit Value
1		Mining: An Overview of Its Importance and Practice	8	Single
2		Mining Physics and Chemistry	10	Double
3		Mining Geology	14	Triple
4		Conveyancing, Surface Rights, Minerals and Mineral Rights	40	Single
5		Mining Mechanical Engineering	41	Single
6		Physical, Descriptive and Deterministic Mineralogy	43	Single
7		Health and Safety For Mining Engineering	46	Single
8		Copper: Its Occurrence, Isotopes, General, Physical and Chemical Properties	49	Single
9		Managing Mining Engineering Projects	51	Single

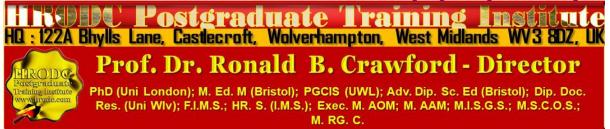
Mining Engineering: Course - Page 6 of 61



PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc Res. (Uni WIv); 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.



Mining Engineering: Course - Page 7 of 61



Mining Engineering: Mining Practices, Physics, Chemistry, Mineral Rights, Safety, Mechanical Engineering and Deterministic Mineralogy, Programme

Leading to Postgraduate a Postgraduate Diploma in Mining Engineering

Programme Contents, Concepts and Issues

Module 1 Mining: An Overview of Its Importance and Practice

M1 - Part 1: Mining and Mining Development and The Role of The State in Stimulating and Maintaining The Mining Industry

- Mining As a Process and Industry;
- Government Role and Influence in Mining;
- Mineral Prospecting and Exploration;
- Mine Exploitation Facilitation;
- Mining Investment Growth or Decline.
- Mine Development;
- Production Operations;
- Geomechanics;
- Environmental Health and Safety Issues in The Mining Industry.

M1 - Part 2: Types of Mining

- Place Mining;
- Hydraulic Mining;
- Hardrock Mining;

Mining Engineering: Course - Page 8 of 61

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

Prof. Dr. Ronald B. Crawford - Director

Pastgraduate Training Institute
Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.
Res. (Uni WIV); 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.

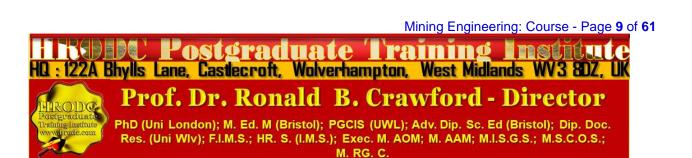
- Surface or Open Pit Mining;
- Underground Mining;
- Long Walls Underground Mining;

M1 - Part 3: Conceptual and Contextual Issues in Surface and Underground Mining

- Surface and Underground Mining: A Distinction
- Historical Review Surface Mining:
- Economic and Environmental Benefits of Underground Mining;
- Types of Equipment Used for Underground Mining;
- General Operation of Equipment Crucial to the Effectiveness of Underground Mining;
- Identification and Resolution of Problems with Underground Mining;
- Mechanical Extraction Methods of Surface Mining.

M1 - Part 4: Methods of Underground Mining: Problems and Prospects

- Charting the Development of Underground Mining;
- Self-Supported Underground Mining;
- Supported Underground Mining;
- Caving Underground Mining;
- Types of Equipment Used for Surface Mining;
- General Operation of Equipment Crucial to the Effectiveness of Surface Mining;

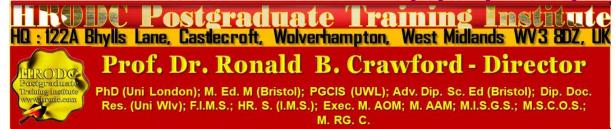


Module 2 (Double Credit) Mining Physics and Chemistry

M2 - Part 1: Metals and Non-Metals: Their Symbols, Abundance, and Production

- Actinium;
- Aluminium;
- Americium:
- Antimony;
- Arsenicl;
- Barium;
- Berkelium;
- Beryllium;
- Bismuth;
- Bohrium;
- Boron:
- Brominel
- Cadmium:
- Caesium;
- Calcium;
- Californium;
- Carbon;
- Cerium;
- Chlorine;
- Chromium;
- Cobalt;
- Copper;
- Curium;
- Darmstadtium;
- Dubnium;

Mining Engineering: Course - Page 10 of 61

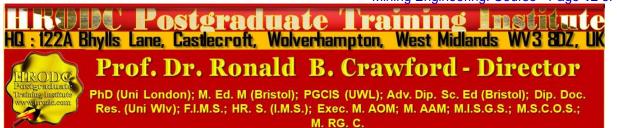


- Dysprosium:
- Einsteinium;
- > Erbium;
- Europium;
- Fermium;
- > Fluorine;
- Francium;
- Gadolinium;
- Gallium;
- Germanium;
- Gold;
- Hafnium;
- Hassium;
- Holmium;
- > Holmium:
- Hydrogen;
- Indium;
- lodine;
- Iridium;
- Iridium;
- Iron;
- Lanthanum;
- Lawrencium;
- Lead;
- Lithium;
- Lutetium;
- Magnesium;
- Magnesium;
- Manganese;
- Meitnerium;
- Mendelevium;
- Mercury;

Mining Engineering: Course - Page 11 of 61

- Molybdenum;
- Neodymium;
- Neptunium;
- Nickel;
- Niobium;
- Nitrogen;
- Nobelium;
- Osmium.
- Oxygen;
- Palladium;
- Phosphorus;
- Platinum;
- Plutonium;
- Potassium;
- Praseodymium;
- Promethium;
- Protactinium;
- Radium;
- Rhenium:
- Rhodium;
- Roentgenium;
- Rubidium;
- Ruthenium;
- Rutherfordium;
- Samarium;
- Scandium;
- Seaborgium;
- Selenium;
- Silicon;
- Silver;
- Sodium;
- Strontium;

Mining Engineering: Course - Page 12 of 61

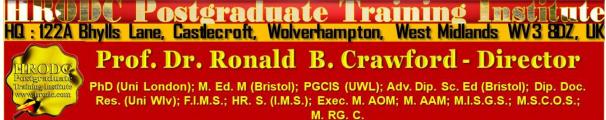


- > Sulfur:
- > Tantalum;
- > Technetium;
- > Tellurium
- > Terbium;
- Thallium;
- > Thorium;
- > Thulium;
- > Tin;
- Titanium;
- Tungsten;
- Ununbium;
- Ununpentium;
- Ununquadium;
- Ununtrium;
- Uranium;
- Vanadium:
- Ytterbium;
- Yttrium;
- Zinc;
- Zirconium;

M2 - Part 2: The Earth's Most Abundant Metals, Value and Degree of Exploitation!

- Aluminum;
- Calcium;
- Hydrog
- Iron;
- Magnesium;

Mining Engineering: Course - Page 13 of 61



- Oxygen;
- Potassium;
- Silicon;
- Sodium;
- Titanium.

Module 3 (Triple Credit) Mining Geology

- Rock Formation and Types;
- Overview Origins of Rock Plates;
- Rock Strengths;
- The Anticline;
- Seismology As A Geological Tracking Mechanism;
- ➤ The Relationship Between Mineral Precipitation And Seismic Movements:
- Seismic Measurements And Their Value In Mining Engineering;
- 2D Seismic: Its Benefits And Limitations In Mining Engineering;;
- 3D Seismic In Mining Engineering
- Stratigraphy ForMining Engineering,
- Sedimentology: A Modern Perspective ForMining Engineering:
- Petrology And Its Pragmatic Value;
- The Importance Of Stratigraphy In Mining Engineering;
- Cliff Formations:
- Whole Rock Geochemical Analyses;
- Classification Of Sandstones:
- Trace Element Geochemical Analyses;
- Depositional Features Identified In Stratigraphy;
- Gowganda And Lorrain Formations;
- Modal Analyses And Its Geological Bases;
- Understanding Sedimentary Systems;

Mining Engineering: Course - Page 14 of 61

HISTORY POSTGRAGUATE TRAINING INSTITUTE
HQ: 122A Bhylls Lane, Castecroft, 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 WIV); 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.

- DC Resistivity Survey (Schlumberger Array) And Its Potential Value In Geoelectrical Sounding;
- Induced Seismic Activity;
- Understanding Shallow And Deep Structures;
- Mineral Exploration Methods;
- Vertical Electrical Resistivity Sounding (VES) In Geological Surveys;
- The Use Of Injection Wells In Induced Seismic Activity;
- Sediment Fluxes:
- Modern And Ancient Sedimentary Environments
- Sequence Stratigraphy;
- Sediment-Organism Interaction
- Stable Isotope Geochemistry;
- Environmental Sedimentology;
- Asthenosphere Astronomic Theory of Glaciation;
- Asymmetric Rock Knob or Hill B;
- 14C Method: Determining The Age of Organic Matter;
- 40K/40Ar Method: Dating Potassium-Bearing Rocks.

Contextualising Geological Concepts

- Angular Unconformity;
- Aphanitic Rocks
- Angle of Incidence;
- Angle of Reflection;
- Angle of Refraction;
- Angle of Repose;
- Angular Unconformity;
- Assemblage;
- Ablation Of Glacier Ice:
- Absolute Time
- Abundant Metal:
- Abyssal Plain; .

Mining Engineering: Course - Page 15 of 61

- Acceleration:
- Accretion;
- Acid Mine Drainage;
- Acid Rain;
- Active Layer;.
- Aftershock;
- Agate Rock;
- Craton;
- Creep;
- Crevasse;
- Cross-Bedding;
- Cross-Cutting Relationships;
- Crust;
- Crystal;
- Crystal Settling;
- Crystal Structure;
- Crystalline;
- Cumulate;
- Curie Point;
- Cyclothem;
- Darcy's Law;
- Daughter;
- Debris Flow;
- Decay Rate;
- Decomposition;
- Deflation;
- Dehydration;
- Delta;
- Dendritic Drainage;
- Denudation;
- Depositional Environment;
- Depositional Remanent Magnetism;

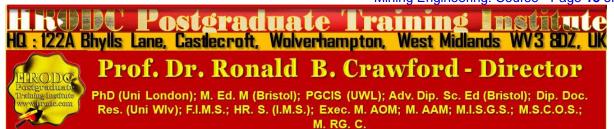
Mining Engineering: Course - Page 16 of 61

- Desert Pavement:
- Desertification;
- Detrital Sedimentary Rock;
- Detrital Sediments;
- Diagenesis;
- Differential Weathering;
- Differentiation;
- Dike:
- Dilatancy;
- Dip;
- Dip Pole;
- Dip Slip Fault;
- Directed Pressure;
- Discharge;
- Disconformity;
- Discordant;
- Disintegration;
- Dissolution;
- Dissolved:
- Distributary Channels;
- Divergent Boundary;
- Dolostone;
- Dome;
- Drag Fold;
- Drainage Basin;
- Drainage Divide;
- Drift:
- Dripstone;
- Drumlin;
- Dry Farming;
- Drylands;
- Ductile;

Mining Engineering: Course - Page 17 of 61

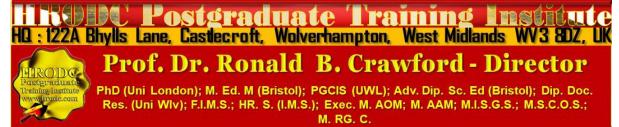
- Dust Bowl:
- Dust Devil;
- Dust Storm;
- Earth System;
- Earthflow;
- Eccentricity Of The Earth's Orbit;
- Elastic;
- Elastic Rebound:
- Elasticity;
- Electron;
- Electron Capture;
- Electron Shell;
- Element;
- End Moraine;
- > Eon;
- Epicenter;
- Epoch;
- Equilibrium Line;
- Era:
- Erratic;
- Esker;
- ETP Curve;
- Eustatic Change In Sea Level;
- Eutrophication;
- Evaporate;
- Exfoliation;
- Exfoliation Dome;
- Exotic River;
- Extrusive;
- Facies;
- Failed Rift;
- Fall;

Mining Engineering: Course - Page 18 of 61



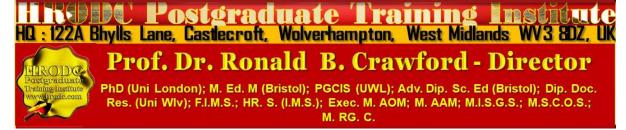
- Fault:
- Fault Gouge;
- Ferromagnesian;
- > Fetch;
- Field Capacity;
- Fiery Cloud;
- > Fjord;
- > Firn (Névé);
- Fission;
- Fission Track Dating;
- Fissure Eruption;
- Flash Flood;
- Flashy Stream;
- Flint;
- Flood;
- Flood Recurrence Interval;
- Floodplain;
- > Flow;
- Flow Folding;
- Flowstone;
- Fluid Inclusion;
- Focus;
- Foliation;
- Fold And Thrust Mountains;
- Foot Wall Block;
- Formation Water;
- Foreset Bed;
- Foreshock:
- Foreshore:
- Fossil;
- Fossil Fuel;
- Fractional Crystallization;

Mining Engineering: Course - Page 19 of 61



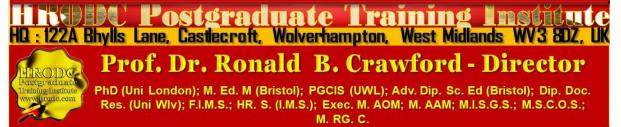
- Fragipan;
- Free Oscillation;
- Fringing Reef;
- Frost Wedging;
- Fusion;
- Gabbro;
- Gardening;
- Geanticline;
- Geode:
- Geologic Column;
- Geologic Time Scale;
- Geosyncline;
- Geothermal Energy;
- Geothermal Gradient;
- Geyser;
- Glaciation;
- Glacier:
- Glacier Ice;
- Glass;
- Glassy;
- Global Warming;
- Gneiss;
- Gneissosity;
- Gondwana;
- Gouge;
- Graben;
- Graded Bedding;
- Gradient;
- Granite;
- Granitic Belt;
- Granitization;
- Gravitational Heating;

Mining Engineering: Course - Page 20 of 61



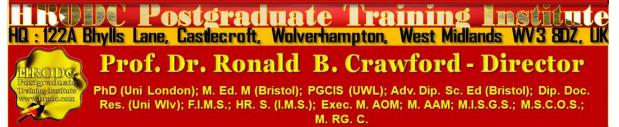
- Gravitational Moisture:
- Graywacke (Lithic Sandstone);
- Greenhouse Gases;
- Greenstone;
- Greenstone Belt;
- Groin;
- Groove;
- Ground Moraine:
- Ground Water Table:
- Ground Water;
- Guyot;
- Habit;
- Hadean;
- Half-Life;
- Hanging Valley;
- Hanging Wall Block;
- Hardness;
- Hardpan;
- Head (Hydraulic Head);
- Heat Flow;
- Heave;
- Hiatus;
- High Level Nuclear Waste;
- Hinge Fault;
- Hoodoo;
- Hooke's Law;
- Horn:
- Horst Compare Rift;
- Hot Spot;
- Humus;
- Hydraulic Conductivity;
- Hydraulic Gradient;

Mining Engineering: Course - Page 21 of 61



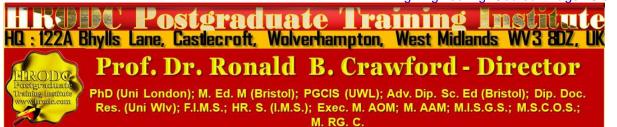
- Hydraulic Head See Head;
- Hydrograph;
- Hydrologic System (Or Hydrologic Cycle);
- Hydrolysis;
- Ice Sheet;
- Ice Shelf;
- Icecap;
- Igneous Rock;
- Inclined Bedding (Cross-Bedding);
- Inclined Fold;
- Inclusion (Xenolith);
- Index Fossil;
- Index Mineral;
- Inertia;
- Inner Core;
- Intensity;
- Interlobate Moraine:
- Intrusive:
- lon;
- Ionic Radius;
- Ionic Substitution;
- Iron Catastrophe;
- Ironpan;
- Island Arc;
- Isochemical Reaction;
- Isoclinal Fold;
- Isograd;
- Isotope;
- Isostasy;
- Isostatic Change In Sea Level;
- Jasper;
- Jet Flow;

Mining Engineering: Course - Page 22 of 61



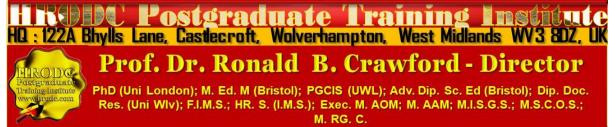
- Jetty:
- Joint;
- Juvenile Hydrothermal Fluid;
- Kame;
- Kame Terrace;
- Karst;
- Kettle;
- Komatiite:
- Laccolith;
- Lag Time;
- Lahar;
- Laminar Flow;
- Lateral Continuity;
- Lateral Moraine;
- Laterite;
- Laurasia;
- Lava:
- Lava Dome;
- Lava Flood (Plateau Basalt);
- Lava Lake;
- Layered Complex;
- Levees;
- Limb;
- Limestone;
- Linear Dune;
- Lineation;
- Liquefaction;
- Lithic Sandstone:
- Lithification:
- Lithophile;
- Lithosphere;
- Lithostatic Stress;

Mining Engineering: Course - Page 23 of 61



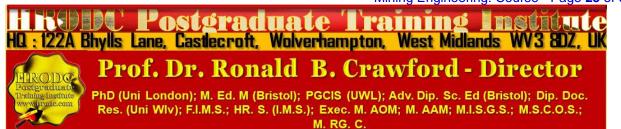
- Littoral Current:
- Load;
- Loess;
- Longshore Current (Littoral Current);
- Longshore Drift;
- Love Wave;
- Low Level Nuclear Waste (TRU);
- Low Velocity Zone;
- Luster;
- Mafic;
- Magma;
- Magma Ocean;
- Magnetic Anomaly;
- Magnetic Chron;
- Magnetic Declination;
- Magnetic Equator;
- Magnetic Inclination;
- Magnetic Polarity;
- Magnetic Polarity Time Scale;
- Magnetic Pole;
- Magnetic Stratigraphy;
- Magnetic Subchron;
- Magnetic Polarity;
- Magnitude;
- Mantle;
- Mantle Plume;
- Marble;
- Margin;
- Mass Movement:
- Maze Cave;
- Meander;
- Medial Moraine;

Mining Engineering: Course - Page 24 of 61



- Mélange (Clastic Wedge);
- Mesosphere;
- Mesozoic;
- Metal Porphyry Deposit;
- Metamorphic Facies;
- Metamorphic Rock;
- Metamorphic Zone;
- Metamorphism;
- Metasomatism;
- Microplate;
- Migmatite;
- Milankovitch Curve (ETP Curve);
- Mineral;
- Mineral Deposit;
- Modified Mercalli Scale;
- Mohorovicic Discontinuity (Moho)
- Mohs Scale:
- Molecule;
- Momentum Transfer;
- Monocline;
- Moraine;
- Mountain Glacier;
- Mud Cracks;
- Mudflow;
- Mudstone;
- Mylonite;
- Nappe;
- Neck Cutoff;
- Neutron;
- Névé;
- Nivation;
- Nodule;

Mining Engineering: Course - Page 25 of 61

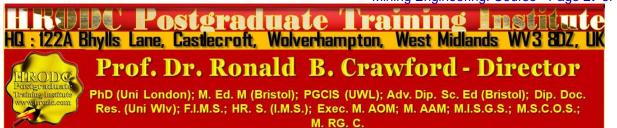


- Nonclastic:
- Nonconformity;
- Normal Fault;
- Normal Polarity;
- North Magnetic Pole;
- Nuclear Power;
- Nucleus (Atomic);
- Nuée Ardente (Fiery Cloud);
- Obliquity Of The Earth's Ecliptic;
- Oceanic Crust;
- Oolite;
- Open Pit Mining;
- Ophiolite;
- Ore;
- Ore Deposit;
- Original Horizontality;
- Orogeny;
- Orogeny;
- Oscillation Ripple Mark;
- Outer Core;
- Outwash;
- Outwash Plain;
- Over Bank Deposits;
- Overturned Fold;
- Oxbow;
- Oxbow Lake;
- Oxidation;
- Ozone Hole;
- P- Wave:
- Pahoehoe;
- Paleomagnetism;
- Paleosol;

Mining Engineering: Course - Page 26 of 61

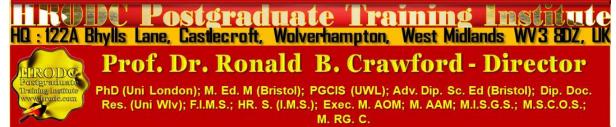
- Paleozoic:
- Pangea;
- Parabolic Dune;
- Parent;
- Partial Melting;
- Pascal;
- Pedalfer;
- Pedocal;
- Pegmatite;
- Pegmatitic;
- Pelagic Ooze;
- Peléan Eruption;
- Peneplain;
- Perched Water Table;
- Periglacial;
- Period;
- Permafrost Table:
- Permafrost;
- Permeability;
- Petroleum;
- Phaneritic;
- Phanerozoic;
- Phenocryst;
- Phyllite;
- Piedmont Glacier;
- Pillow;
- Pipe;
- Pirate Stream;
- Placer;
- Plate;
- Plate Boundaries;
- Plate Tectonics;

Mining Engineering: Course - Page 27 of 61



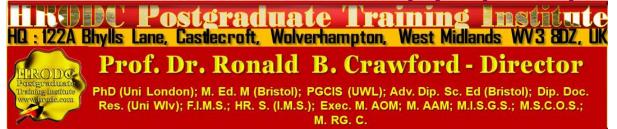
- Plate Triple Junction;
- Playa;
- Plucking (Quarrying);
- Plume;
- Plunging Fold;
- Pluton;
- Pluvial Lake;
- Pluvial Period:
- Pocket Beach:
- Point Bar;
- Polar Deserts;
- Polar Glacier;
- Polish;
- Polymetamorphism;
- Polymorphism;
- Porosity;
- Porphyritic;
- Porphyroblast;
- Potentiometric Surface:
- Pothole;
- Precambrian;
- Precession Of The Equinox;
- Pressure Melting;
- Principle Of Faunal And Floral Succession;
- Prograde;
- Proterozoic;
- Proton;
- Pyroclastic;
- Quarrying;
- Quartz Arenite;
- Quartzite;
- Radial Drainage;

Mining Engineering: Course - Page 28 of 61



- Radiation:
- Radioactivity;
- Radiocarbon;
- Rain Shadow Deserts;
- Ramp;
- Rapids;
- Rayleigh Wave;
- Reaction Rim;
- Recessional Moraine;
- Rectangular Drainage;
- Recumbent Fold;
- Refraction;
- Regional Metamorphism;
- Regolith;
- Rejuvenation;
- Relative Time;
- Remanent Magnetism;
- Reserves:
- Reservoir Rock:
- Residual (Resistant) Mineral;
- Residual Soil;
- Resources;
- Retrograde Reverse Fault Reversed Polarity;
- Rhyolite;
- Richter Scale;
- Rift (Graben);
- Rip Current;
- Ripple Marks Of Oscillation;
- Ripple Marks;
- Rock;
- Rock Avalanche;
- Rock Cleavage;

Mining Engineering: Course - Page 29 of 61



- Rock Cycle;
- Rock Flour;
- Rock Glacier;
- Rock Record;
- Rockslide (Rock Avalanche);
- Rock System;
- Rock Varnish;
- Rock Waste;
- Rockfall;
- Roundness;
- Runoff;
- S Wave;
- Salinization;
- Salt-Water Invasion;
- Saltation;
- Sand Dune;
- Sand Sea:
- Sandstone:
- Sandstorm:
- Sanitary Land Fill;
- Schist;
- Schistosity;
- Seafloor Spreading;
- Seamount (Guyot);
- Seawall;
- Sedimentary Facies;
- Sedimentary Rock;
- Seismic Gap;
- Seismic Sea Wave (Tsunami);
- Seismic Tomography;
- Seismic Records From A Large Number Of Stations;
- Seismograph;

Mining Engineering: Course - Page 30 of 61

- Seismology;
- Seismoscope;
- Self-Exciting Dynamo;
- Shadow Zone;
- Shale;
- Shatter Cone;
- Shear;
- Shear Strength;
- Shear Stress;
- Sheeting;
- Shield Volcano;
- Shock Lamellae;
- Shock Metamorphism;
- Shore;
- Shore Face:
- Shore Platform;
- Sial:
- Sialic;
- Silica;
- Silica Tetrahedron;
- ➤ Sill;
- Sima;
- Sinkhole;
- Sinking Stream;
- Slate;
- Slaty Cleavage;
- Slickenside:
- Slide;
- Slip Face;
- Slump;
- Snow Line;
- Snowfields;

Mining Engineering: Course - Page 31 of 61

- > Soil:
- Soil Horizon;
- Soil Moisture;
- Soil Structure;
- Soil Texture;
- Sole Mark;
- Solifluction;
- Sorting;
- South Magnetic Pole;
- Specific Gravity;
- Specific Retention (Field Capacity);
- Sphericity;
- Spit;
- Spoil;
- Spreading Axis (Spreading Center);
- Spreading Pole;
- Spring;
- Stack;
- Stalactite;
- Stalagmite;
- Star Dune;
- Stick-Slip;
- Stock;
- Stoping;
- Storm Surge;
- Strain;
- Strain Rate;
- Strain Seismograph;
- Stratification:
- Stratified Drift;
- Stratigraphy;
- Stratovolcano (Composite Volcano);

Mining Engineering: Course - Page 32 of 61

HISTORY POSTGRADUATE TRAINING INSTITUTE
HQ: 122A Bhylls Lane, Castecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

Physical Lane of the Course - Page 32 of 61

HTS POSTGRADUATE TRAINING Engineering: Course - Page 32 of 61

HTS POSTGRADUATE TRAINING Engineering: Course - Page 32 of 61

HTS POSTGRADUATE TRAINING Engineering: Course - Page 32 of 61

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni WIv); 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.

- Streak:
- Stream Capture;
- Stream Order;
- Stream Piracy (Stream Capture);
- Stream Terrace;
- Strength;
- Stress;
- Striations:
- Strike;
- Strike-Slip Fault (Transcurrent Fault);
- Strip Mining;
- Subduction Zone;
- Sublimation;
- Subtropical Deserts;
- Superimposed Stream;
- Superposition;
- Surf:
- Surface Of Discontinuity;
- Surging Glacier;
- Suspended Load;
- Suspension;
- Suture;
- Swash And Back Wash;
- Swells;
- Syncline;
- Tailings;
- Talus:
- Tar:
- Tar Sand;
- Tarn;
- Tell;
- Temperate Glacier;

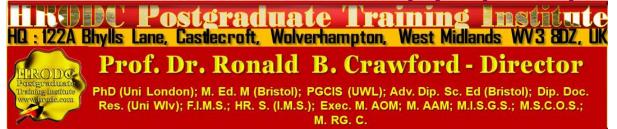
Mining Engineering: Course - Page 33 of 61

- Tensile Fracture:
- Tension;
- Tephra;
- Terminal Moraine (End Moraine);
- Terrane (Microplate);
- Texture;
- "The Present Is The Key To The Past";
- Thermal Conductivity;
- Thermal Gradient:
- Thermal Spring;
- Thermoremanent Magnetism;
- Threshold Of Movement;
- Thrust Fault;
- Thrust Sheet;
- Tidal Delta;
- Tidal Inlet;
- Tidal Power:
- ➤ Till;
- Topset Bed;
- Triangulation;
- Trans Current Fault;
- Transform Boundary;
- Transform Fault;
- Transported Soil;
- Transverse Dune;
- Trap;
- Travel:
- Travertine (Tufa);
- Trellis Drainage;
- Trench;
- Troughs And Bars;
- TRU;

Mining Engineering: Course - Page 34 of 61

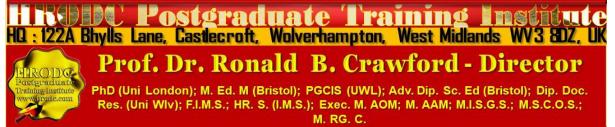
- Truncated Spur;
- Tufa;
- Tuff;
- Turbidite;
- Turbulent Flow;
- U-Shaped Valley;
- Unconformity;
- Uniformitarianism:
- Unloading;
- Unstratified Drift;
- USDA Soil Classification System;
- Valley Glacier;
- Valley Train Varve;
- Velocity;
- Velocity Profile;
- Vent Fact;
- Vesicle:
- Vesicular;
- Viscosity;
- Volcanic Ash;
- Volcanic Cinder;
- Volcano;
- Volcanogenic Massive Sulfide Deposit;
- Vulnerable Mineral;
- Wadati-Benioff Zone;
- Waste Isolation Pilot Plant;
- Water Gap;
- Water Power:
- Water Table:
- Waterfall;
- Wave Base:
- Wave Crest;

Mining Engineering: Course - Page 35 of 61



- Wave Height;
- Wave Length;
- Wave Trough;
- Welded Tuff;
- Well;
- Wilson Cycle;
- Wilting Point;
- Wind Farm;
- Wind Gap;
- Wind Power:
- Alluvial Fan;
- Alpha Decay;
- Alpha Particle;
- Alpine Glacier;
- Amygdule;.
- Amygdaloidal Rocks;
- Andesite Rock:
- Andesite Line Of Rocks;
- Angle of Incidence;
- Angle of Reflection;.
- Angle of Refraction;
- Angle of Repose;
- Aquitard;
- Arch;
- Archean Period;.
- Arête Formation;
- Arkose Rock:.
- Artesian Well; .
- Energetic Projectile;
- Craton;
- Creep;
- Crevasse;

Mining Engineering: Course - Page 36 of 61

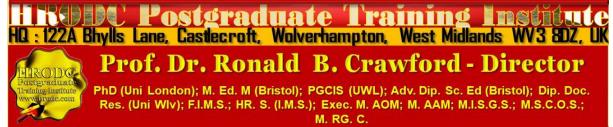


- Cross-Bedding;
- Cross-Cutting Relationships;Wind Shadow;
- Xenolith;
- X-Ray Diffraction Yardang;
- Yazoo-Type River Yield Point;
- Yucca Mountain;
- Zone of Ablation;
- Zone of Accumulation;
- Zone of Aeration;
- Zone of Flow;.
- Zone of Fracture;
- Zone of Leaching;
- Zone of Saturation;
- Assemblage;
- Asthenosphere;
- Astronomic theory of glaciation;
- Asymmetric rock knob or hill;
- Atoll;
- Atom;
- Atomic mass number;
- Atomic number;
- Aureole;
- Authigenesi;
- Axial plane;
- Axis;
- Back-arc basin;
- Back swamp;
- Backshore;
- Banded iron formation;
- Bankfull stage;
- Bar 1;

Mining Engineering: Course - Page 37 of 61

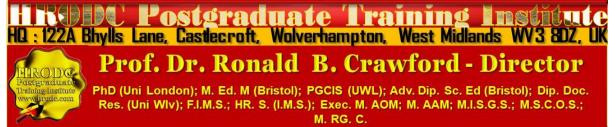
- Barchan;
- Barrier beaches or islands;
- Barrier reef;
- Basalt;
- Base flow;
- Base level:
- Batholith;
- Bauxite:
- Beach replenishment; beach;
- Bed load;
- Bedding;
- Bedding plane;
- Bedrock;
- Beheaded stream;
- Beta decay;
- ➤ Bif;
- Binding energy;
- Biogenic sediment;
- Biogenic sedimentary rock;
- Bioturbation;
- Black smoker;
- Blind valley;
- Blowout;
- Body wave;
- Bond;
- Bottomset bed;
- Boudinage;
- Boulder train;
- Boundary;
- Bowen's Reaction Series;
- Braided stream;
- Branch work cave;

Mining Engineering: Course - Page 38 of 61



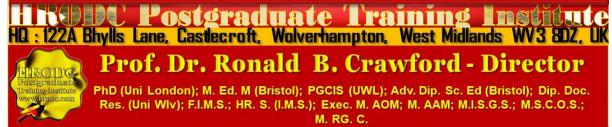
- Breakwater:
- Breccia;
- Breeder reactor;
- Brittle;
- Brittle limit;
- Burial metamorphism;
- Calcarenite;
- Caldera;
- Caliche:
- Calving;
- Cap rock;
- Capacity;
- Capillary water;
- Carbonate conservation depth; .
- Carbonate rock;
- Cataclastic metamorphism;
- Cation;
- Cave;
- Cementation;
- Cenozoic;
- Chain reaction;
- Chalcedony;
- Chalk;
- Chemical bond;
- Chemical remanent magnetism;
- Chemical sediment;
- Chemical sedimentary rock;
- Chemical weathering;
- Chert;
- Chalcedony;
- Chlorofluorocarbons;
- Chute cutoff;

Mining Engineering: Course - Page 39 of 61



- Cinder cone:
- Cirque;
- Clastic;
- Clay 1;
- Claypan;
- Cleavage 1;
- Coal;
- Coast;
- Col:
- Column;
- Columnar jointing;
- Compaction;
- Competence;
- Composite;
- Comprehensive Soil Classification System (CSCS);
- Compression;
- Concordant;
- Concretion;
- Conduction;
- Cone of depression;
- Conglomerate;
- Constancy of Interfacial Angles;
- Contact metamorphism;
- Continental arc;
- Continental crust;
- Continental deserts;
- Continental divide:
- Continental drift;
- Continental;
- Continental rise;
- Continental shelf;
- Continental slope;

Mining Engineering: Course - Page 40 of 61



- Convection:
- Convection cell;
- Convergent boundary;
- Co-product;
- Coquina;
- Core;
- Correlation;
- Crater 1.

Module 4 Conveyancing, Surface Rights, Minerals and Mineral Rights

- Conveyancing and Property Valuation: An Introduction;
- Title As Evidence of Property Ownership;
- Conveyancing As the Transference of Legal Ownership;
- Property Ownership;
- Joint Tenancy;
- Tenancy in Common;
- Legal Bases of Inheritance;
- Charge As a Basis for Assigning Property in Joint Tenancy;
- Property Value Determination;
- Distinction Between Surface Rights and Mineral Rights and Their Implications for Owners and Prospectors;
- Fee Interest and the Associated Mineral Rights;
- Mineral Interests;
- Conveyancing and the Acquisition and Disposal of Surface Rights and Mineral Interest;
- Overriding Royalty Interests (ORI;
- Working Interest;
- The Concept of Overriding Interest (ORI);
- Retained ORI Production Payment Interest (PPI);

Mining Engineering: Course - Page 41 of 61

Postgraduate Training Institute
HQ: 122A Bhylls Lane, Castecroft, Wolverhampton, West Midlands WV3 BDZ, 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 WIv); 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.

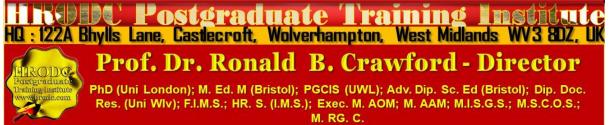
- Carved-Out Net Profits Interest:
- Royalty Provision;
- Primary Term;
- Delay Rental Payment;
- Shut-In Payment;
- Right To Assign Interest;
- Right To Free Use Of Resources For Lease Operations;
- Option Payment;
- Offset Clause:
- Net Profits Interest Created From Mineral Interest

Module 5 Mining Mechanical Engineering

M5 - Part 1: Mining Equipment: Their Uses and Operation

- American Augers Auger Boring Machine 72;
- Amphibious Cranes;
- Amphibious Excavators;
- Asphalt Mixing Plants;
- Asphalt Pavers;
- Asphalt Transporters;
- Barcoding System;
- Bauer BG 36 with BTM 400; CSP System;
- Cable Excavators; Stripping Shovels;
- Chips Seal Trucks.
- Container Stacking and Storage System;
- Conveyor Belts System;
- Cranes;
- Cross-docking Facilitation;
- Dredges Drills;

Mining Engineering: Course - Page 42 of 61



- Dry Dock Facility;
- Electrical, Electronic and Mechanical
 Diagnostic and Repair Experts.
- Electronic Tracking System;
- Excavators;
- Excavators;
- Front-end Loaders;
- Hydraulic Drilling Rig Mi8 For Diamond Core;
- Long-Reach Boon Forklift Trucks;
- Lorries;
- Mechanical Recover Vehicles;
- Motorcycles;
- Multi Power Hydraulic Diamond Drill "Simba Diamond Drilling";
- Non-Walking Draglines;
- Overflow Storage Facilities;
- Oversize Storage System;
- Pallet Stackers:
- Pallets:
- Percussion Drill.
- Pneumatic Rollers;
- Precision Picking Guidance System;
- Rack Storage System;
- Railroad Shovels;
- Roc Belt conveyors
- Semi-trailers;
- Ship Repair Facility;
- Skeletal Trailers:
- Steel Rollers:
- Tracked Cranes:
- Tractor Equipment;
- Trailers;
- Walking Draglines;

Mining Engineering: Course - Page 43 of 61

HITCH POSTGRAGUATE TRAINING INSTITUTE
HQ: 122A Bhylls Lane, Castlecroft, Wolverhampton, West Midlands WV3 8DZ, UK

Prof. Dr. Ronald B. Crawford - Director

Page 43 of 61

Record - Page 43 of 61

Prof. Dr. Ronald B. Crawford - Director

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc. Res. (Uni WIv); 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.

- Wellpoint drill;
- Wheeled Cranes.

M5 - Part 2: Drilling Mechanics

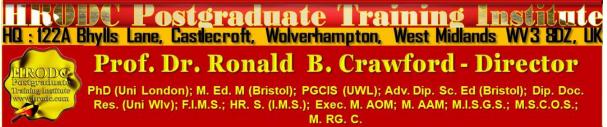
- Rat Hole;
- Mouse Hole;
- Drilling Platform;
- Drilling Rig;
- Drill Stem Test;
- Derek and Derek Hands;
- Cracking;
- Seismic Exploration;
- Injection Well;
- Offset Well;
- Stratigraphic Well.

Module 6 Physical, Descriptive and Deterministic Mineralogy



- Charting The Rise of Mineralogy;
- Modern Mineralogy:

Mining Engineering: Course - Page 44 of 61

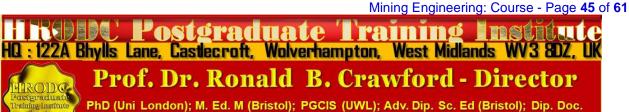


M6 - Part 1: Physical Mineralogy

- Biomineralogy;
- Chemical Mineralogy;
- Cleavage;
- Color;
- Crystal Habit;
- Crystal Structure;
- Crystal Structure;
- Diaphaneity;
- Formation Environments;
- Hardness;
- Luster;
- Optical Mineralogy;
- Specific Gravity;
- Streak;
- Twinning.

M6 - Part 2: Descriptive Mineralogy

- Carbonates, Nitrates and Borates;
- Halides;
- Native Elements;
- Organic Minerals;
- Oxides and Hydroxides;
- Phosphates, Arsenates and Vanadates;
- Silicates:
- Sulfates, Chromates, Molybdates and Tungstates;
- Sulfides.



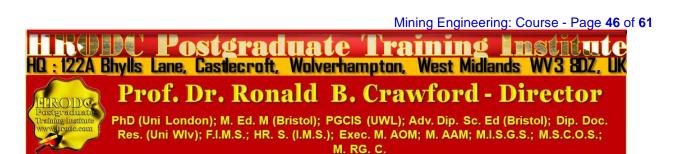
PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc Res. (Uni Wlv); F.I.M.S.; HR. S. (I.M.S.); Exec. M. AOM; M. AAM; M.I.S.G.S.; M.S.C.O.S.; M. RG. C.

M6 - Part 3: Mineral Analysis Techniques

- Xray Diffraction;
- Thin Section Analysis;
- Chemical Analysis;
- Scanning Electron Microscopy;
- Mineralology.

M6 – Part 4: Insights Into The Role and Contribution of Some International Associations and Projects in Deterministic Mineralogy

- International Mineralogical Association
- The Mineralogical Society
- mindat.org mineralogical database
- Mineralogical Society of America
- 10th International Congress of Applied Mineralogy August 1-5, 2011
- Mineralogical Association of Canada
- The Giant Crystal Project
- The Geological Society of America
- The Virtual Museum of the History of Mineralogy
- The American Federation of Mineral Societies
- National and Economic Value of Minerals.



Module 7 Health and Safety For Mining Engineering

Prioritising Workers' Health and Safety Interest While in the Workplace

M7 - Part 1: Health and Toxic Substances

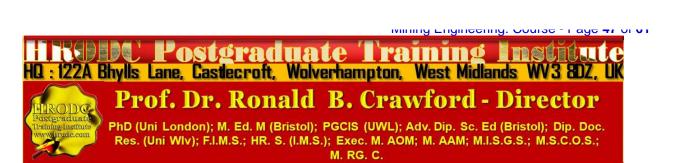
- Baseline Examinations;
- Toxic Substances:
- Measures of Exposure;
- Standards Completion Project;
- Detecting Contaminants.

M7 - Part 2: Environmental Control and Noise

- Ventilation;
- > ASHRAE Standards and Indoor Air Quality;
- Industrial Noise:
- Radiation.

M7 – Part 3: Flammable and Explosive Materials

- Flammable Liquids;
- Sources of Ignition;
- Standards Compliance;
- Combustible Liquids;
- Spray Finishing;
- Dip Tanks;
- Explosives;
- Liquefied Petroleum Gas.



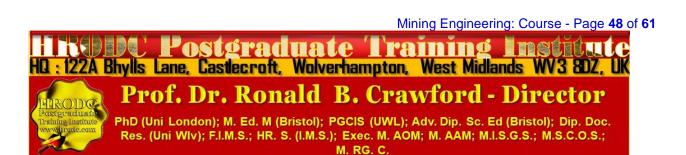
M7 - Part 4: Personal Protection and First Aid

- Protection Need Assessment;
- Personal Protective Equipment (PPE) Training;
- Hearing Protection;
- Eye and Face Protection;
- Respiratory Protection;
- Confined Space Entry;
- Head Protection;
- Miscellaneous Personal Protective Equipment;
- First Aid.

Safety Precautions and Emergency Incident Risk Management

M7 - Part 5: Fire Protection

- Mechanics of Fire;
- Industrial Fires;
- Fire Prevention;
- Dust Explosions;
- Emergency Evacuation;
- Fire Brigades;
- Fire Extinguishers;
- Standpipe and Hose Systems;
- Automatic Sprinkler Systems;
- Fixed Extinguishing Systems;



M7 - Part 6: Materials Handling and Storage

- Materials Storage;
- Industrial Trucks;
- Passengers;
- Cranes;
- Slings;
- Conveyors;
- Lifting.

M7 - Part 7: Machine Guarding

- General Machine Guarding;
- Safeguarding the Point of Operation;
- Power Presses;
- Heat Processes;
- Grinding Machines;
- Saws;
- Miscellaneous Machine Guarding;
- Miscellaneous Machines and Processes:
- Industrial Robots;
- Introduction to Risk Management;
- Risk Retention;
- Risk Identification;
- Risk Evaluation;
- Risk Control Techniques;
- Risk Assumption and Risk Financing.

M. RG. C.

Module 8 Copper: Its Occurrence, Isotopes, General, Physical and Chemical Properties

- History and Age of Copper;
- General properties;
- Symbol;
- Atomic number;
- Element category;
- Group;
- Phase:
- Appearance;
- Density;
- Liquid density;
- Melting point;
- Boiling point;
- Heat of fusion;
- Heat of vaporization;
- Molar heat capacity;
- Standard atomic weight;
- Electron configuration;
- Atomic properties
- Oxidation states;
- Electronegativity;
- lonization energies;
- Atomic radius;
- Covalent radius;
- Van der Waals radius:
- Vapor pressure
- Crystal structure
- Magnetic ordering
- Electrical resistivity

Mining Engineering: Course - Page 50 of 61

- Thermal conductivity
- Thermal expansion
- Speed of sound;
- Young's modulus;
- Shear modulus;
- Bulk modulus;
- Poisson ratio;
- Mohs hardness:
- Vickers hardness:
- Brinell hardness;

Physical and Chemical Characteristics of Copper

- Physical properties of Copper;
- Chemical Properties of Copper
- Isotopes of Copper
- Occurrence

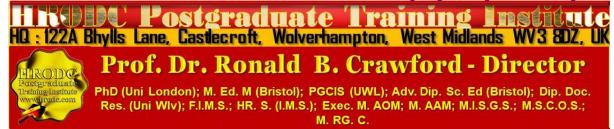
Production of Copper

- Copper Reserves:
- Methods of Copper Production;
- Copper Recycling and Its Environmental Consequence;
- Copper Alloys;
- Copper Compounds;
- Copper compounds
- Coordination chemistry
- Organocopper chemistry
- Modern period.

Industrial Uses of Copper

- General Architectural Uses:
- Manufacture of Electronics and related devices;

Mining Engineering: Course - Page 51 of 61



- Use in Electric motors:
- Wire and cable Construction.

Module 9 **Managing Mining Engineering Projects**

- Introduction to Mining Engineering Development Projects;
- The Concepts of Stakeholders VS Shareholder;
- Mining Engineering Development Project Life Cycle;
- Mining Engineering Project Feasibility Study;
- Mining Engineering Project Budgeting: Important Considerations;
- Mining Engineering Project Procurement;
- Mining Engineering Project Contingencies;
- Mining Engineering Project Design;
- Mining Engineering Value Engineering: An Introduction;
- Mining Engineering Project Planning;
- Mining Engineering Project Workflow;
- Mining Engineering Project Scheduling;
- Mining Engineering Project Execution: Mining Engineering Construction;
- Mining Engineering Project Monitoring;
- Mining Engineering Project Evaluation;
- Mining Engineering Project Finance;
- Mining Engineering Project Management: Stakeholder Analysis;
- Mining Engineering Project Commissioning;
- Motivating Workers in Mining Engineering Project Management: An Introduction;
- Time Management In Mining Engineering Project Management: Salient Issues.



Res. (Uni WIV); 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.

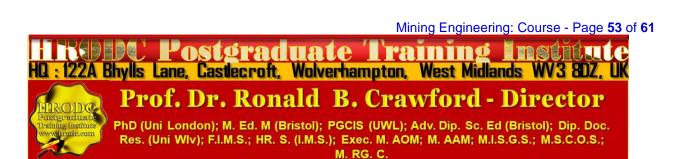
Postgraduate Diploma, Postgraduate Certificate, and Diploma – Postgraduate - Short Course Regulation

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.

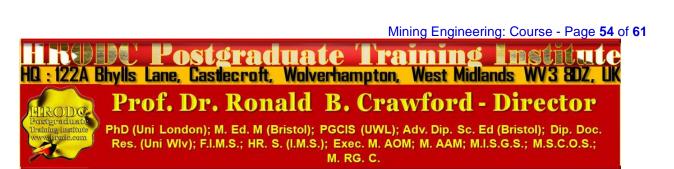
In the case of Diploma – Postgraduate, a minimum of 70% overall pass is expected. In order to receive the Awards of Postgraduate Certificate and Postgraduate Diploma, candidates must have accumulated at least the required minimum 'Credit-Hours', with a pass (of 70% and above) in at least 70% of the courses 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

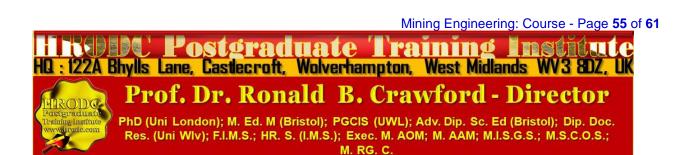
- On receipt of all the above documents we will assess applicants' suitability for the Course or Programme for which they have applied;
- If they are accepted on their chosen Course or Programme, they will be notified accordingly and sent Admission Letters and Invoices;
- One week after the receipt of 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:

- 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.
- 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;

Mining Engineering: Course - Page 56 of 61

Howard Postgraduate Training Institute
Howard B. Crawford - Director

Prof. Dr. Ronald B. Crawford - Director

PhD (Uni London); M. Ed. M (Bristol); PGCIS (UWL); Adv. Dip. Sc. Ed (Bristol); Dip. Doc.

Res. (Uni WIv); 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.

➤ 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

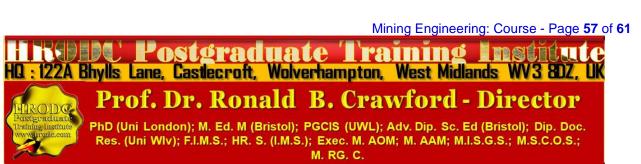
You might study an Online Postgraduate Certificate or Online Postgraduate Diploma, in 10 and 20 weeks, respectively, in the comfort of your office or homes, through HRODC Postgraduate Training Institute's Video-Enhanced Online Delivery. We will deliver the 180 Credit-Hours and 360 Credit-Hours, in line 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

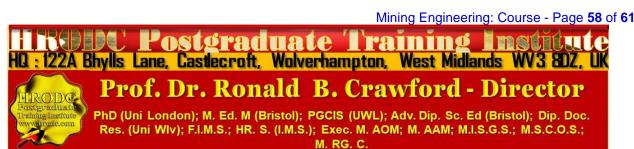


achieved, within the designated period. These Credit-Values, awards and their accumulation are exemplified below.

Examples of Postgraduate Course Credits:		
Their Value, Award Prefix & Suffix – Based on 5-Day Multiples		
Credit Value	Credit	Award Title Prefix (& Suffix)
Hours Hours		
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		

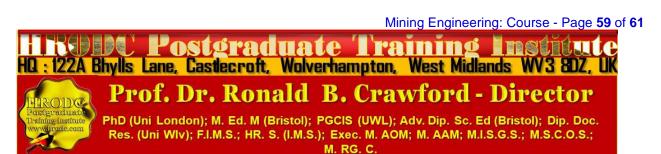
Exemplification of Accumulated Postgraduate Certificate and Postgraduate Diploma Award Titles

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



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;
- 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;

Mining Engineering: Course - Page 60 of 61

HILL POSTGRADUATE TRAINING INSTITUTE
HD: 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 WIv); 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.

- 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

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

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

Prof. Dr. Ronald B. Crawford Director HRODC Postgraduate Training Institute

