

# Online Professional Diploma and Training

## Fundamentals of Quantitative Risk Management - FQRM

### This 5-day intensive course teaches

essential topics and practical applications in quantitative risk management in oil and gas and energy companies. Group projects and a practical assessments will be conducted to obtain the FQRM attendance certificate.

The FQRM is a practical hands-on training coordinated by Dr Elvis Hernandez-Perdomo and delivered by accredited professional trainers in quantitative risk management.

Delegates will:

- Learn the principles of quantitative risk management for organizational and professional success (i.e., financial performance, budgeting, pricing, costing, and stress testing).
- Understand how risk analysis, risk modelling, and model validation help to make better-informed business decisions.
- Identify the main concepts, measurements, and definitions for risk management.
- Implement uncertainty analysis, applied analytics (tornado and sensitivity analysis), and risk quantification while understanding how risk profiles and forecasting help to achieve better business outcomes.

Complemented with case studies and examples, the diploma in FQRM is endorsed by the **IIPER's Skills Certification** scheme. In addition, the FQRM training course makes use of leading risk management technologies provided by **OSL Risk Management (UK)** and **Real Options Valuations (USA)** as part of an IIPER-accredited training program.



**Delivered in Partnership with:**

International Institute of Professional Education and Research (IIPER)

**Supporting Organizations:**

OSL Risk Management (UK), and Real Option Valuations (US)

## Who should attend?

Any professional interested in understanding and engaging more in quantitative risk management from a broader perspective across energy and oil and gas companies. (i.e., managers, analysts, engineers, auditors, health and safety officers, students, or risk management practitioners).

The QORM also gives the fundamental principles and knowledge in Monte Carlo risk simulations plus the applied analytics to pursue the international **CQRM Accreditation - Certified in Quantitative Risk Management**, provided by the IIPER and recognised by multiple professional bodies (PMI, IChemE, Energy Institute, IRM, ACPA, and CFA Institute, among others).

## Learning outcomes

**By the end of this course you will:**

- Learn the basic concepts and definitions of quantitative risk management and uncertainty analysis.
- Identify critical risk factors (risk identification vs risk quantification) and apply risk analytics (Tornado Analysis and Sensitivity Analysis).
- Learn how to implement Monte Carlo risk simulations, analyse correlations, and interpret risk forecasts in financial performance, budgeting, pricing, costing, and stress testing.
- Understand fundamental ways to mitigate, hedge and reduce risks in energy and oil and gas businesses.
- Understand the importance of leadership, communication, and integrated risk management.
- Leverage your IT and analytical skills using the Risk Simulator software.

**Delegates will be provided with:**

- IIPER's CPD Skills Certificate.
- FPRM support material (pdf files, excel templates, and Risk Simulator models).
- 1-year Full Industry License and Risk Simulator®
- 6-month access to OSL Analytics Academy for the QRMBS online verified training (<https://www.oslanalyticsacademy.com/courses/iiper-quantitative-risk-management-gbbs>)

## Course outline

### Day 1: Fundamentals of Quantitative Risk Management

- Introduction to Risk Management (Energy and Oil and Gas overview)
- Risk Modelling and Risk Quantification
- Introduction to Monte Carlo Simulation
- Case Study and Application

### Day 2: Data Analytics

- Principles of Probability and Statistics
- Correlation Analysis in Risk Management
- Introduction to Data Fitting and
- Uncertainty Analysis
- Case Study and Application

### Day 3: Decision Analytics

- Tornado Analysis
- Sensitivity Analysis
- Static and Dynamic Models
- Exporting and Reporting Stochastic Results
- Case Study and Application

### Day 4: Decision-Making Support

- Bootstrapping
- Overlay Charts
- Multidimensional Simulations
- Stress Testing
- Case Study and Application

### Day 5: Group Project and Presentations

- Practical Assessment: risk management (process, strategy, and objective-setting)
- Practical Assessment, Report and
- Presentation

## Training board

### Academic Director

**Prof. Dr Johnathan Mun** is the IIPER-Certified in Quantitative Risk Management Program Director, coordinating worldwide executive programs, professional accreditations, and education standards in quantitative methods and risk management, and also enhancing high-quality teaching among the IIPER Certified Trainers.

As the founder and CEO of Real Options Valuation, Inc., Dr Mun is responsible for developing its suite of analytical software products and consulting. As the software's creator, with over 12 patents and 10,000 pages of copyrighted materials, he teaches Risk Analysis, Real Options for Analysts, Risk Analysis for Managers, CQRM, and other courses. He has written over 20 books on the topic of risk.

Dr Mun has consulted on risk analysis, valuation, and real options for many Fortune 500 firms from 3M, BP, Chevron, Airbus, and Boeing to GE, Motorola, and the U.S. government including the Department of Defense. He is also a full U.S. Naval Postgraduate School professor and has held other adjunct professorships at various universities.

### Program Director

**Prof. Dr Elvis Hernandez-Perdomo** is a Senior IIPER-CQRM Certified Trainer with over twenty years of experience in risk management, project management, corporate governance, economic valuations, and real options in energy-related companies. He is the Director of OSL Risk Management (UK), Senior Risk Specialist at OSL Consulting Engineering, and Senior Executive Consultant at Real Options Valuations, Inc. (ROV - USA), working on real options, risk management, Monte Carlo Risk Simulation, optimisation, and business intelligence analytics.

Dr Elvis has a PhD in Finance (University of Hull), a PhD in Engineering Science, an MSc in Finance, an MSc in Operational Research & Statistics, and a BS in Economics, and is CQRM Accredited and Associated in Business ERP by SAP Corporation. He is also a Visiting Professor and Fellow at the Academy of Higher Education and Energy Institute in the UK, with academic articles published in international peer-review journals in reliability systems, energy markets, engineering, risk, uncertainty, and the like.

## Bespoke in-house courses

Bespoke courses can be tailored to the needs of your own organisation and can be held on your premises.

### Course Delivery and Support

- This accelerated and intensive course will be delivered by Microsoft Teams (two days, 9.00-12.00 and 13.00-16.00), with intervals of 10 minutes after each hour of training.
- The instructor will provide a two-hour session after the training (optional) to discuss potential risk quantification approaches and applications into the Client's operational or managerial activities.
- At not additional costs, each participant will receive a 1-year license of the Risk Simulator software and 6-month access accredited course on "**Quantitative Risk Management – Business Simulation**" by **OSL Analytics Academy**. It will enhance learning-by-doing during and after the training.
- Note that each Risk Simulator license has an annual price per user, and each online accredited course on "Quantitative Risk Management – Business Simulation" has a price per delegate, if purchased separately



In accordance with sponsors and professional bodies, this training provides a "16 CPDs IIPER Skills Certification" on completion of the course.

**QORM**  
Fundamentals of Quantitative Risk Management



## For more information contact

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