

## COURSE OVERVIEW TM0055(KJ1) Petroleum Economics & Risk Analysis

### Course Title

Petroleum Economics & Risk Analysis

### Course Reference

TM0055(KJ1)

### Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



### Course Date/Venue

Session(s)	Date	Venue
1	July 07-11, 2025	TBA Meeting Room, Grand Hyatt Athens, Athens, Greece
2	September 22-26, 2025	Hampstead Meeting Room, London Marriott Hotel Regents Park, London, UK
3	November 24-28, 2025	TBA Meeting Room, JW Marriott Hotel Madrid, Madrid, Spain
	January 04-08, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

### Course Description



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using “MS-Excel” application.***



This course is designed to provide participants with a detailed and up-to-date overview of petroleum economics and risk analysis. It covers the cash flow analysis, energy usage, basic principles of oil and gas economics and economics terms; the cash flow calculation, depreciation methods, loss carry forwards, inflation, nominal and real cash flow and abandonment and sunk costs; and the economic indicators including present value concept, discount factor and net present value and internal rate of return.



During this interactive course, participants will learn the payback period, profit/investment ratio, incremental projects and effect of project delay; the risk and uncertainties, expected value concept, decision tree analysis, farm-out decision, probability analysis, sensitivity analysis, probability distribution and monte carlo simulation; the spreadsheet calculation, simple cash flow using Excel, NPV calculations and application of economic indicators; and the oil field development model including integrated economic model of a typical oil field development and project sensitivity analysis for a selected model.



## Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on petroleum economics and risk analysis
- Explain cash flow analysis, energy usage, basic principles of oil and gas economics and economics terms
- Set up cash flow calculation and recognize depreciation methods, loss carry forwards, inflation, nominal and real cash flow and abandonment and sunk costs
- Describe economic indicators including present value concept, discount factor and net present value and internal rate of return
- Discuss payback period, profit/investment ratio, incremental projects and effect of project delay
- Illustrate risk and uncertainties, expected value concept, decision tree analysis, farm-out decision, probability analysis, sensitivity analysis, probability distribution and monte carlo simulation
- Set up spreadsheet calculation as well as perform simple cash flow using Excel, NPV calculations and application of economic indicators
- Set up oil field development model including integrated economic model of a typical oil field development and project sensitivity analysis for a selected model

## Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

## Who Should Attend

This course provides an overview of all significant aspects and considerations of petroleum economics and risk analysis for both technical and non-technical personnel as well as operational staff at professional levels employed in refineries, petrochemical, and oil and gas process industries, The course is designed to be substantial benefit to personnel within the oil and gas industries such as oil and gas planners and financial analysts, personnel requiring a broad understanding of the structure, operations and economics of the oil and gas industries, oil and gas field engineers, managers and auditors, technologists and mechanical engineers and operations, maintenance or project engineers.

## Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures

20% Practical Workshops & Work Presentations

30% Hands-on Practical Exercises & Case Studies

20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.




### **Course Certificate(s)**

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

### **Certificate Accreditations**

Haward's certificates are accredited by the following international accreditation organizations:

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.





### Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



**Mr. Eric Matthews** is a **Senior Management Consultant** with almost **40 years** of extensive experience. His expertise includes **Survey Skills, Interviewing Skills, Interpersonal Skills, Communication Skills, Negotiation Skills, Presentation Skills, Manager Skills, Supervisory & Management Skills, Counselling Skills, Leadership Skills, Customer Satisfaction, Coaching & Mentoring, Team Building, Survey Format & Design, Survey Data Auditing & Tabulation, Human Resource Management (HRM), Human Resource Development (HRD) Training, Quality Management System (QMS), Change Management, Project Management, Contract Management, Business Management, Time Management, Performance Management, Performance Appraisal, Managing Problem Situations & Dealing With Difficult People, Leading Multicultural Teams & Managing Diversity, Lean Thinking and Six Sigma, 360 Feedback Assessment, Strategic Leader, Strategic Decision Making and Creative Problem Solving & Decision Making.** Moreover, his experience includes Construction Safety (STOP), Process Safety Management (PSM), Risk Management, Marine Risk Assessment, ISO 14001 (2004) Lead Auditor, OSHA, SHEQ, Industrial Hygiene, Confined Space Entry, Fall Protection, Work Permit & First Aid, Forklift Operations, Accident & Incident Prevention, Site Inspection, HSE Leadership, Safety Attitude and Industrial Plant Safety as well as Pneumatic, Control Systems and Logic Boards. He is currently the **Managing Director of Ken Matthews & Associates Training Consultancy.** Further, he is a **Registered and Certified Trainer** where-in he is delivering various training and consultancy for trainers for so many years, an **Assessor, Moderator, Verifier and Program Designer & Developer** as well as an **Authorized Accreditation Advisor.**

During Mr. Matthews' career life, he has shared his knowledge and practical expertise through the continuous and numerous trainings internationally. He started his profession from various challenging positions such as the **Tooling Engineer, Mechanical Technician, Sea Going Engineer, Safety Officer, Senior Lecturer/Professor, College Mentorship Programme Head, Curriculum & Project Designer, Learning Material Developer, Management Consultant, Trainer & Assessor and Moderator & Verifier.**

Mr. Matthews has **Bachelor** degree in **Industrial & Organizational Psychology** with **Honours (Cum Laude).** Further, he is a **Certified Instructor/Trainer;** a **Certified Trainer/Assessor** by the **City & Guilds of London Institute;** a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM);** a **Registered SETA Assessor/Moderator/Skills Coach** and an active member of the British Institute of Works Managers and British Institute of Personnel Managers and delivered innumerable trainings, courses, seminars and workshops worldwide.



### Course Fee

Athens	<b>US\$ 8,800</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
London	<b>US\$ 8,800</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Madrid	<b>US\$ 8,800</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	<b>US\$ 5,500</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

### Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

#### **Day 1**

0730 – 0800	<i>Registration &amp; Coffee</i>
0800 – 0815	<i>Welcome &amp; Introduction</i>
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Cash Flow Analysis</b>
0930 – 1000	<b>Introduction to the Oil &amp; Gas Industry</b>
1000 – 1015	<i>Break</i>
1015 – 1100	<b>History of Energy Usage</b>
1100 – 1145	<b>Basic Principles of Oil &amp; Gas Economics</b>
1145 – 1230	<b>Familiarization with Economics Terms</b>
1230 – 1245	<i>Break</i>
1245 – 1315	<b>Setting Up Cash Flow Calculation</b>
1315 – 1420	<b>Depreciation Methods &amp; Loss Carry Forwards</b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

#### **Day 2**

0730 – 0845	<b>Inflation</b>
0845 – 0915	<b>Nominal &amp; Real Cash Flow</b>
0915 – 1000	<b>Abandonment &amp; Sunk Costs</b>
1000 – 1015	<i>Break</i>
1015 – 1100	<b>Economic Indicators</b>
1100 – 1145	<b>Economic Indicators Definitions</b>
1145 – 1230	<b>Present Value Concept</b>
1230 – 1245	<i>Break</i>
1245 – 1315	<b>Discount Factor &amp; Net Present Value</b>
1315 – 1420	<b>Internal Rate of Return</b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>



### Day 3

0730 – 0845	<b><i>Payback Period</i></b>
0845 – 0915	<b><i>Profit/Investment Ratio</i></b>
0915 – 1000	<b><i>Incremental Projects</i></b>
1000 – 1015	<b><i>Break</i></b>
1015 – 1100	<b><i>Effect of Project Delay</i></b>
1100 – 1145	<b><i>Risk &amp; Uncertainties</i></b>
1145 – 1230	<b><i>Expected Value Concept</i></b>
1230 – 1245	<b><i>Break</i></b>
1245 – 1315	<b><i>Decision Tree Analysis</i></b>
1315 – 1420	<b><i>Farm-Out Decision</i></b>
1420 – 1430	<b><i>Recap</i></b>
1430	<b><i>Lunch &amp; End of Day Three</i></b>

### Day 4

0730 – 0845	<b><i>Probability Analysis</i></b>
0845 – 0915	<b><i>Sensitivity Analysis</i></b>
0915 – 1000	<b><i>Probability Distribution</i></b>
1000 – 1015	<b><i>Break</i></b>
1015 – 1100	<b><i>Monte Carlo Simulation</i></b>
1100 – 1145	<b><i>Setting up Spreadsheet Calculation</i></b>
1145 – 1200	<b><i>Break</i></b>
1200 – 1300	<b><i>Simple Cash Flow Using Excel</i></b>
1300 – 1420	<b><i>NPV Calculations</i></b>
1420 – 1430	<b><i>Recap</i></b>
1430	<b><i>Lunch &amp; End of Day Four</i></b>

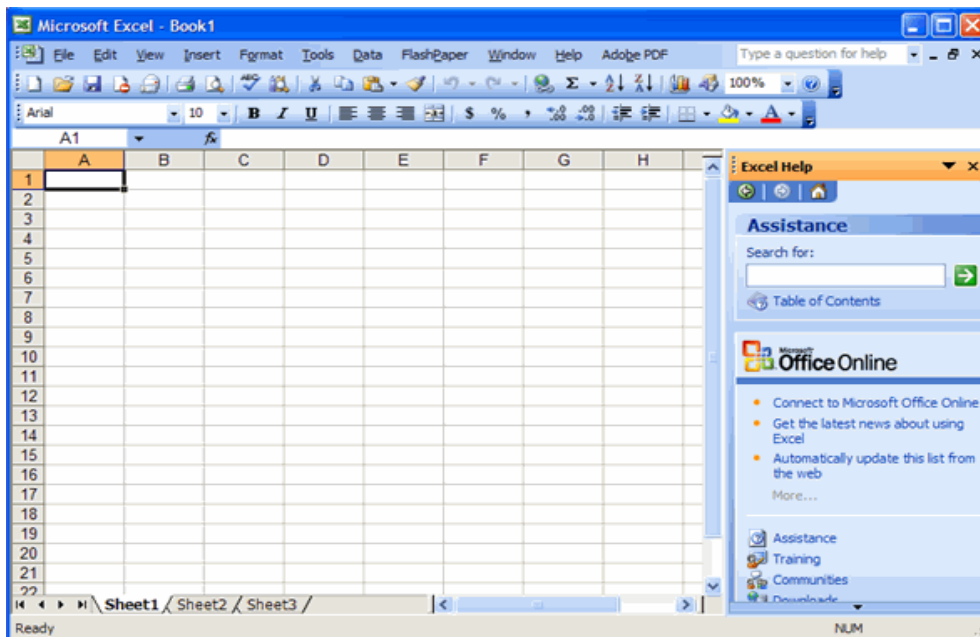
### Day 5

0730 – 0900	<b><i>Application of Economic Indicators</i></b>
0900 – 1100	<b><i>Setting Up Oil Field Development Model</i></b>
1100 – 1200	<b><i>Setting Up an Integrated Economic Model of a Typical Oil Field Development</i></b>
1200 – 1215	<b><i>Break</i></b>
1215 – 1400	<b><i>Project Sensitivity Analysis for a Selected Model</i></b>
1400 – 1415	<b><i>Course Conclusion</i></b>
1415 – 1430	<b><i>POST-TEST</i></b>
1430	<b><i>Lunch &amp; End of Course</i></b>



### **Simulator (Hands-on Practical Sessions)**

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using “MS-Excel” application.



**MS-Excel**

### **Course Coordinator**

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