

**COURSE OVERVIEW DE0919**  
**Basic Petroleum Economics**

**Course Title**

Basic Petroleum Economics

**Course Date/Venue**

June 22-26, 2026/Online Virtual Training

**Course Reference**

DE0919

**Course Duration/Credits**

Five days/2.75 CEUs/27.5 PDHs



**Course Description**



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.***



This course is designed to provide participants with a detailed and up-to-date overview of Basic Petroleum Economics. It covers the scope of petroleum economics, oil & gas industry value chain and basic economic terminology; the time value of money (conceptual), oil & gas pricing basics and the role of geology in economics; the exploration costs, development costs and production costs; the revenue estimation, production profiles and decline rate concept; the reserves and resources classification and cash flow analysis; and the net present value (NPV), internal rate of return (IRR) and payback period.



During this interactive course, participants will learn the break-even analysis, economic indicators comparison and various types of risks in petroleum projects; the geological uncertainty, sensitivity analysis, scenario analysis and decision-making under uncertainty; the economic impact of geological decisions, petroleum fiscal systems, fiscal framework and economic evaluation workflow; and the cost optimization strategies covering reducing drilling costs, improving recovery factor, technology impact on economics and efficiency improvements.

## Course Objectives/Outcomes & Benefits for the Participants

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

- Apply and gain a basic knowledge on petroleum economics
- Discuss the scope of petroleum economics, oil & gas industry value chain and basic economic terminology
- Recognize time value of money (conceptual), oil & gas pricing basics and the role of geology in economics
- Identify exploration costs, development costs and production costs
- Carryout revenue estimation and discuss production profiles and decline rate concept
- Apply reserves and resources classification including cash flow analysis
- Discuss net present value (NPV), internal rate of return (IRR) and payback period
- Employ break-even analysis and discuss economic indicators comparison including the various types of risks in petroleum projects
- Explain geological uncertainty and apply sensitivity analysis, scenario analysis and decision-making under uncertainty
- Discuss the economic impact of geological decisions covering well placement decisions, field development options, reservoir management strategies and cost versus recovery trade-offs
- Recognize petroleum fiscal systems, fiscal framework and economic evaluation workflow
- Apply cost optimization strategies covering reducing drilling costs, improving recovery factor, technology impact on economics and efficiency improvements

## Who Should Attend

This course provides an overview of all significant aspects and considerations of petroleum economics for petroleum engineers, reservoir engineers, production engineers, drilling engineers, geoscientists (geologists and geophysicists), energy economists, finance and investment analysts (oil and gas sector), project managers (upstream / downstream), business development professionals, government and regulatory personnel (energy sector), supply chain and commercial professionals in oil and gas, entry-level staff in the petroleum industry and other technical staff.

## 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.

**Learning Design & Customization**

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

**Virtual Training (If Applicable)**

If this course is delivered online as a Virtual Training, the following limitations will be applicable:-

Certificates	Only soft copy certificates will be issued to participants through Haward’s Portal. This includes Wallet Card Certificates if applicable
Training Materials	Only soft copy Training Materials (PDF format) will be issued to participant through the Virtual Training Platform
Training Methodology	80% of the program will be theory and 20% will be practical sessions, exercises, case studies, simulators or videos
Training Program	The training will be for 6 hours per day starting at 0800 and ending at 1400
H-STK Smart Training Kit	Not Applicable
Hands-on Practical Workshops	Not Applicable
Site Visit	Not Applicable
Simulators	Only software simulators will be used in the virtual courses. Hardware simulators are not applicable and will not be used in Virtual Training

**Course Fee**


**US\$ 4,000** per Delegate + **VAT**.

**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 **2.75 CEUs** (Continuing Education Units) or **27.5 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. Ron Guney, MSc, BSc, is a Senior Geophysicist with over 30 years of Offshore & Onshore experience within the Oil, Gas, Refinery and Petrochemical industries. His expertise widely covers Geophysics, Geophysical Technology, Borehole Geophysics, Seismology, Wave Propagation & Velocities, Seismic Acquisition Techniques, Seismic Data Processing, Vertical Seismic Profiling (VSP), Seismic Data Interpretation, Geomodelling, Prospect Generation-Delineation & Reservoir Modelling, Static Modelling,**

**Prospect Generation through Seismic Structural & Stratigraphic Interpretation, Play Assessment & Prospect Evaluation, Prospect-Play Risk Assessment & Ranking, Resource & Reserve Estimations, Post Stack Seismic Attribute Analysis, Post Stack Seismic Inversion, Traveltime Inversion, Crossborehole Seismic Tomography, Seismic Sequence Stratigraphy, Program Coding (VSP & Cross-borehole Travel Time Inversion ART and SIRT), Post Drill Well Assessment, Field Development, Seismostratigraphy, Seismotectonics & Geodynamics & Modelling, Cartographic Information Systems (CIS), Geographic Information Systems (GIS), Geodesy & Topography, Geodesy, Map Projections & Coordinate Systems, Geological Maps (GM), Topographic & Geologic Maps, Cartography Assisted by Computer (CAC), Global Positional System (GPS), Petroleum Geology, Advanced Petrophysics, Petroleum Exploration, Petroleum Economics, Drilling, Core-to-Log Data Integration (SCAL), Basin Modelling & Total Petroleum System (TPS), Well Logging, Formation Evaluation, Well Testing & Data Interpretation, Pore Pressure Prediction and Oil & Gas Reserves Estimations. He is also an expert in 2D & 3D Seismic Interpretation Oil Risk Analysis, Landmark, Zmap+ Mapping Package, Petrel Schlumberger, Promax Processing System and 3D Seismic Data Acquisition. Currently, he is the Senior Geophysicist Consultant of Eastern Offshore Black Sea E&P Projects.**

During his long career, Mr. Guney has gained his practical and field experience through his various significant positions and dedication as the **Senior Geophysicist Consultant, Senior Geophysicist, Senior Project Geophysicist, Teaching Assistant, Lecturer, Instructor/Trainer** from numerous international companies such as the Eastprime Service Co., Emirates National Oil Company (ENOC) - Dragon Oil, OMV Petrol and Turkish Petroleum Corp, just to name a few.

Mr. Guney has a **Master's** degree in **Geology** from the **University of New Orleans, USA** and a **Bachelor's** degree in **Geophysics** from the **Istanbul Technical University**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and has **published books** and **scientific papers** such as **Iterative Wavefront Reconstruction Technique (IWR)**, **Mathematical Geophysics, Model Optimisation in Exploration Geophysics, Importance of Seismic Interpretation Systems** and delivered various trainings, seminars, workshops, courses and conferences worldwide.

### Course Program

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

#### **Day 1: Monday, 22<sup>nd</sup> of June 2026**

0800 – 0815	Registration & Coffee
0815 – 0830	Welcome & Introduction
0830 – 0845	<b>PRE-TEST</b>
0845 – 0930	<b>Introduction to Petroleum Economics</b> Definition & Scope of Petroleum Economics • Role in Upstream Decision-Making • Relationship with Geology & Reservoir Engineering • Overview of Value Chain Economics
0930 – 0945	Break
0945 - 1115	<b>Oil &amp; Gas Industry Value Chain</b> Upstream Midstream Downstream Segments • Exploration versus Development versus Production Economics • Value Chain Overview • Revenue Generation Across Stages
1115 – 1145	<b>Basic Economic Terminology</b> Costs Revenue Profit & Cash Flow • Capital Expenditure (CAPEX) versus Operating Expenditure (OPEX) • Fixed versus Variable Costs • Unit Cost Concepts (Lifting Cost Finding Cost)
1145 – 1200	<b>Time Value of Money (Conceptual)</b> Why Money Has Time Value • Inflation & Purchasing Power • Discounting Concept (Basic Understanding) • Real versus Nominal Values
1200 - 1215	Break
1215 - 1300	<b>Oil &amp; Gas Pricing Basics</b> What Determines Oil Prices • Brent versus Other Benchmarks • Gas Pricing Mechanisms • Price Volatility & Uncertainty
1300 - 1350	<b>Role of Geology in Economics</b> How Geology Impacts Reserves & Production • Geological Risk & Uncertainty • Resource Estimation Basics • Influence on Project Viability
1350 – 1400	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1400	End of Day One

#### **Day 2: Tuesday, 23<sup>rd</sup> of June 2026**

0800 - 0845	<b>Exploration Costs</b> Seismic Acquisition Costs • Drilling Exploration Wells • Geological Studies & Interpretation • Risk of Dry Wells
0845 - 0930	<b>Development Costs</b> Field Development Planning • Drilling Development Wells • Facilities & Infrastructure Costs • Surface versus Subsurface Cost Components
0930 - 0945	Break
0945 – 1100	<b>Production Costs</b> Lifting & Operating Costs • Maintenance & Workovers • Water Handling & Injection Costs • Cost Optimization Basics



1100 – 1200	<b>Revenue Estimation</b> <i>Production Profiles (Plateau &amp; Decline) • Oil &amp; Gas Sales Calculation • Impact of Price Assumptions • Revenue Forecasting Basics</i>
1200 - 1215	<i>Break</i>
1215 - 1300	<b>Production Profiles &amp; Decline</b> <i>Typical Production Curve • Plateau versus Decline Phase • Decline Rate Concept • Impact on Economic Life</i>
1300 - 1350	<b>Reserves &amp; Resources Classification</b> <i>Proven Probable Possible Reserves • Contingent Resources • Role of SPE-PRMS • Link Between Reserves &amp; Economics</i>
1350 – 1400	<b>Recap</b> <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow</i>
1400	<i>End of Day Two</i>

**Day 3: Wednesday, 24<sup>th</sup> of June 2026**

0800 - 0845	<b>Cash Flow Analysis</b> <i>What Is a Cash Flow Model • Inflows versus Outflows • Project Life Cycle Cash Flow • Simple Cash Flow Diagrams</i>
0845 - 0930	<b>Net Present Value (NPV)</b> <i>Concept of Discounting • NPV Interpretation • Positive versus Negative NPV • Decision-Making Using NPV</i>
0930 - 0945	<i>Break</i>
0945 – 1100	<b>Internal Rate of Return (IRR)</b> <i>Definition of IRR • How IRR Is Interpreted • Comparison with Hurdle Rate • Limitations of IRR</i>
1100 – 1200	<b>Payback Period</b> <i>Definition &amp; Calculation • Importance for Decision-Makers • Advantages &amp; Limitations • Use in Early-Stage Screening</i>
1200 - 1215	<i>Break</i>
1215 - 1300	<b>Break-even Analysis</b> <i>Break-even Oil Price • Break-even Production Level • Cost versus Revenue Balance • Practical Examples</i>
1300 - 1350	<b>Economic Indicators Comparison</b> <i>NPV versus IRR versus Payback • When to Use Each Method • Strengths &amp; Weaknesses • Simple Decision Frameworks</i>
1350 – 1400	<b>Recap</b> <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow</i>
1400	<i>End of Day Three</i>

**Day 4: Thursday, 25<sup>th</sup> of June 2026**

0800 - 0845	<b>Types of Risks in Petroleum Projects</b> <i>Geological Risk • Technical Risk • Economic Risk • Political &amp; Market Risks</i>
0845 - 0930	<b>Geological Uncertainty</b> <i>Reservoir Size Uncertainty • Fluid Properties Variability • Structural Uncertainty • Impact on Reserves</i>
0930 - 0945	<i>Break</i>



0945 – 1100	<b>Sensitivity Analysis</b> Purpose of Sensitivity Analysis • Key Variables (Price Cost Reserves) • Tornado Charts (Conceptual) • Identifying Key Drivers
1100 – 1200	<b>Scenario Analysis</b> Best Case versus Worst Case • Base Case Scenario • Combining Uncertainties • Decision Implications
1200 - 1215	Break
1215 - 1300	<b>Decision-Making Under Uncertainty</b> Risk versus Reward Concept • Decision Trees (Basic Idea) • Risk Tolerance • Portfolio Thinking
1300 - 1350	<b>Economic Impact of Geological Decisions</b> Well Placement Decisions • Field Development Options • Reservoir Management Strategies • Cost versus Recovery Trade-offs
1350 – 1400	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1400	End of Day Four

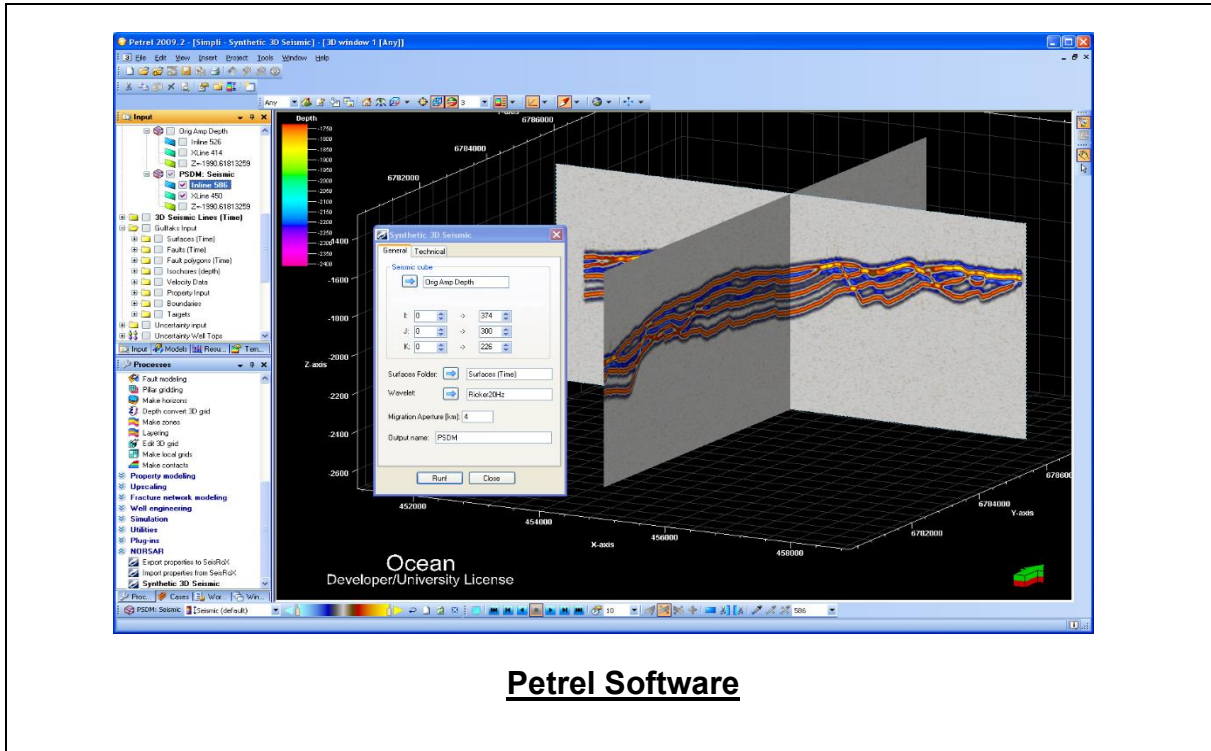
**Day 5: Friday, 26<sup>th</sup> of June 2026**

0800 - 0845	<b>Petroleum Fiscal Systems</b> Royalties & Taxes • Production Sharing Contracts (PSC) • Concessions & Service Contracts • Government Take Concept
0845 - 0930	<b>Fiscal Framework (Basic Overview)</b> Concession System • Role of Partners & Operators • Revenue Sharing Basics • Strategic Importance
0930 - 0945	Break
0945 – 1100	<b>Economic Evaluation Workflow</b> From Geology to Economics • Data Integration Process • Building a Simple Model • Interdisciplinary Collaboration
1100 – 1200	<b>Case Study: Simple Field Evaluation</b> Input Assumptions (Reserves Costs Prices) • Build Basic Cash Flow • Evaluate NPV & IRR • Interpret Results
1200 - 1215	Break
1215 – 1330	<b>Cost Optimization Strategies</b> Reducing Drilling Costs • Improving Recovery Factor • Technology Impact on Economics • Efficiency Improvements
1330 – 1345	<b>Course Conclusion</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1345 – 1400	<b>POST-TEST</b>
1400	End of Course



**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 the “Petrel Software”.



**Course Coordinator**

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