



COURSE OVERVIEW DE0745 Basic Geology

Course Title

Basic Geology

Course Date/Venue

Please refer to page 4

Course Reference

DE0745

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.



This course is designed to provide participants with a detailed and up-to-date overview of the basic geology. It covers the geology and earth science that includes structure of earth and evolution of earth; the geological time scale and earth surface; the rock types and cycling comprising of igneous rocks/volcanic and volcanism, metamorphic rocks, sedimentary rocks/sedimentary process and rock cycling; and the structural geology, the primary structures, stresses/strains and their relations to rock deformation and the faults fractures and unconformities of secondary structures.



Further, the course will also discuss the petroleum and petroleum system process; the origin and occurrence of petroleum including the principal forms of petroleum and unconventional resources; the petroleum system elements covering petroleum source rocks, cap rocks, reservoir rocks and rock property analysis; the exploration techniques for petroleum including geophysical methods, geochemical methods, subsurface methods and exploration application; and the drilling methods and techniques for vertical wells, deviated wells and horizontal wells.



During this interactive course, participants will learn well casing, cementing, well completion, stimulation, fracking and oil refinery; monitoring the well while drilling; the mud logging, log time calculation, rate penetration and its implementation, sample collection and preparation; the ditch sample, hydrocarbon and gas shows evaluation; monitoring the well post drilling and the wireline operations and logging while drilling operations; and the logging tools, basic petrophysical terminology, petrophysical interpretation and petroleum field cycle.

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 geology
- Discuss the geology and earth science covering the structure of earth and evolution of earth
- Describe geological time scale and earth surface
- Identify the rock types and cycling comprising of igneous rocks/volcanic and volcanism, metamorphic rocks, sedimentary rocks/sedimentary process and rock cycling
- Explain structural geology and identify the primary structures, stresses/strains and their relations to rock deformation and the faults fractures and unconformities of secondary structures
- Carryout petroleum and petroleum system process and discuss the origin and occurrence of petroleum including the principal forms of petroleum and unconventional resources
- Recognize petroleum system elements covering petroleum source rocks, cap rocks, reservoir rocks and rock property analysis
- Implement exploration techniques for petroleum including geophysical methods, geochemical methods, subsurface methods and exploration application
- Employ drilling methods and techniques for vertical wells, deviated wells and horizontal wells
- Carryout well casing, cementing, well completion, stimulation, fracking and oil refinery
- Monitor a well while drilling and apply mud logging, log time calculation, rate penetration and its implementation, sample collection and preparation
- Illustrate ditch sample, hydrocarbon and gas shows evaluation
- Monitor well post drilling and apply wireline operations and logging while drilling operations
- Discuss logging tools, basic petrophysical terminology, petrophysical interpretation and petroleum field cycle

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 basic geology for engineering, geophysical and technical personnel who are in need of basic geological training including support and administrative personnel. The course is also beneficial for well-site geologists, drilling and operation engineers and other staff involved in the acquisition and use of well-site (geological) data.

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 Date/Venue

Session(s)	Date	Venue
1	September 14-18, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
2	October 18-22, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
3	October 18-22, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
4	November 01-05, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
5	December 20-24, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
6	January 03-07, 2027	Meeting Plus 9, City Centre Rotana, Doha, Qatar
7	February 07-11, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
8	March 22-26, 2027	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain

Accommodation

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

Course Fee

Seville	US\$ 8,800 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Doha	US\$ 8,500 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
London	US\$ 8,800 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Istanbul	US\$ 8,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	US\$ 8,000 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Cairo	US\$ 8,000 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.



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, Prospect-Play Risk Assessment & Ranking, Resource & Reserve Estimations, Post Stack Seismic Attribute Analysis, Post Stack Seismic Inversion, Travelttime 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.

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.

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 & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	Introduction <i>Objectives & Outlines of the Course • Free Discussion</i>
0830 – 0930	Introduction to Geology & Earth Science <i>Overview on Earth • Structure of Earth (Hydrosphere, Atmosphere, Geosphere & Biosphere) • Evolution of Earth (Nebular Hypothesis – Plate Tectonic)</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Geological Time Scale
1100 – 1230	Representing of Earth Surface
1230 – 1245	<i>Break</i>
1245 – 1420	Rock Types & Cycling <i>Igneous Rocks/Volcanic & Volcanism • Metamorphic Rocks • Sedimentary Rocks/Sedimentary Process • Rock Cycling</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0900	Structural Geology <i>Introduction to Structural Geology • Primary Structures • Stresses/Strains & their Relations to Rock Deformation</i>
0900 – 0915	<i>Break</i>
0915 – 1230	Structural Geology (cont'd) <i>Secondary Structures (Faults Fractures & Unconformities)</i>
1230 – 1245	<i>Break</i>
1245 – 1320	Petroleum & Petroleum System Process <i>Definition • Petroleum (Origin/Occurrence) • Kerogen (Definition, Formation)</i>



1320 – 1420	Petroleum & Petroleum System Process (cont'd) <i>Petroleum (Migration, Accumulation & Timing) • Principal Forms of Petroleum & Unconventional Resources</i>
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	Petroleum System Elements <i>Petroleum Source Rocks • Petroleum Cap Rocks</i>
0930 – 0945	Break
0945 – 1100	Petroleum System Elements (cont'd) <i>Petroleum Reservoir Rocks • Rock Property Analysis</i>
1100 – 1215	Exploration Techniques for Petroleum <i>Introduction to Exploration Techniques • Geological Concept & Surface Geology • Geophysical Methods (Gravity, Magnetic & Seismic)</i>
1215 – 1230	Break
1230 – 1420	Exploration Techniques for Petroleum (cont'd) <i>Geochemical Methods • Subsurface Methods • Exploration Application</i>
1420 - 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0930	Drilling Methods & Techniques <i>Vertical Wells • Deviated Wells & Horizontal Wells • How to Drill a Well? • Drilling Problems</i>
0930 – 0945	Break
0945 – 1100	Drilling Methods & Techniques (cont'd) <i>Well Casing & Cementing • Well Completion & Stimulation • Fracking • Oil Refinery</i>
1100 – 1215	Monitoring a Well While Drilling <i>Mud Logging • Lag Time Calculation • Rate of Penetration & it's Interpretation • Sample Collection & Preparation</i>
1215 – 1230	Break
1230 – 1420	Monitoring a Well While Drilling (cont'd) <i>Ditch Sample Evaluation • Hydrocarbon & Gas Shows Evaluation</i>
1420 - 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0930	Monitoring a Well Post Drilling <i>Introduction to Petrophysics • Wireline Operations • Logging While Drilling Operations</i>
0930 – 0945	Break
0945 – 1100	Monitoring a Well Post Drilling <i>Logging Tools • Basic Petrophysical Terminology • Petrophysical Interpretation</i>
1100 – 1215	Petroleum Field Life Cycle
1215 – 1230	Break

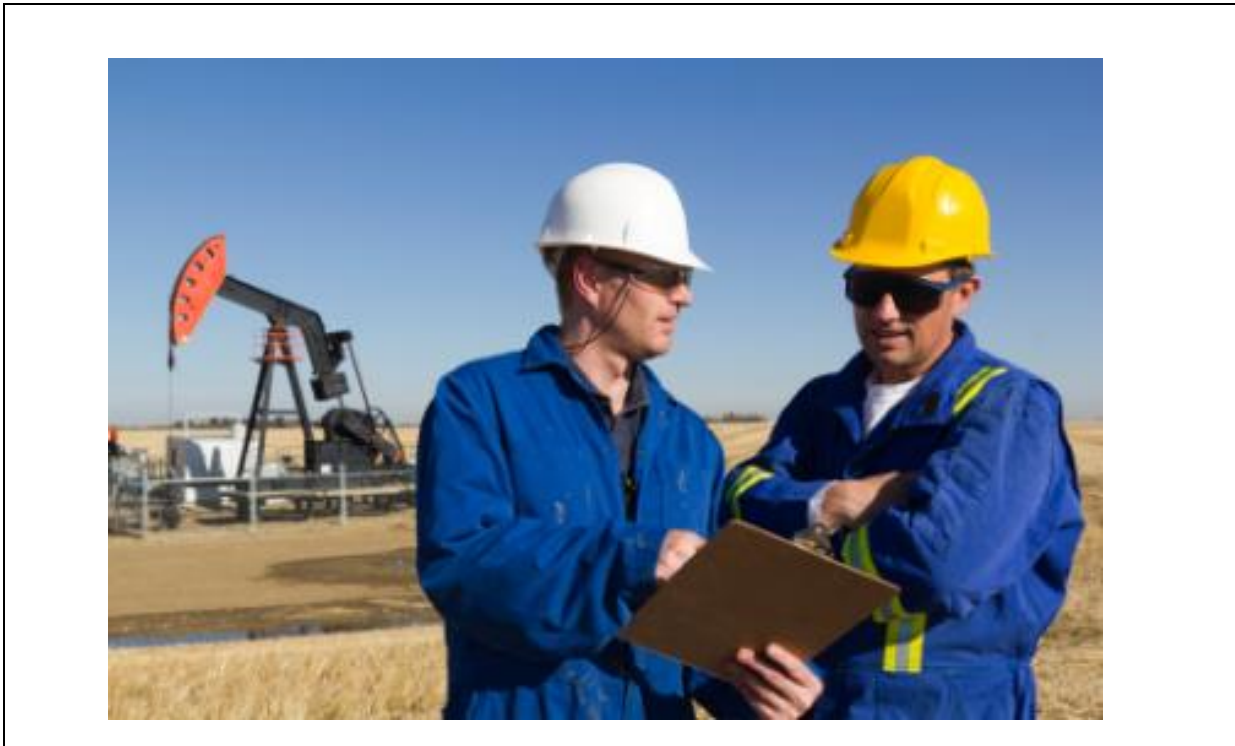




1230 - 1345	<i>Petroleum Field Life Cycle (cont'd)</i>
1345 - 1400	<i>Course Conclusion</i>
1400 - 1415	<i>POST-TEST</i>
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Practical Sessions

This practical and highly-interactive course includes the real-life case studies and exercises: -



Course Coordinator

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