COURSE OVERVIEW SE0070(AD6)

Soil and Geotechnical Information and Soil Investigation

Course Title

Soil and Geotechnical Information and Soil Investigation

Course Date/Venue

Session 1: June 15-19, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Session 2: November 10-14, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

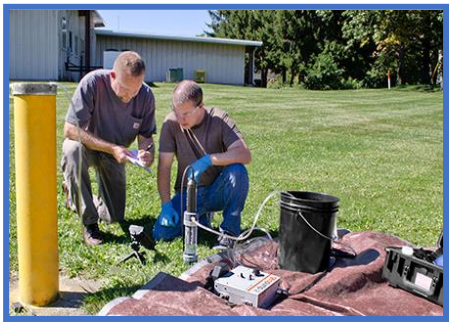
Course Reference

SE0070(AD6)

Course Duration/Credits

Five days/3.0 CEUs/30.0 PDHs

Course Description



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

This course is designed to provide the civil and structural engineers/supervisors with professional knowledge of soil classifications, investigations procedures and soil improvements methods and requirements. It covers the fundamentals of soil mechanics, type of soil, different soil and soil classification; the characteristics of soil covering consistency, apparent density, water content (moisture) and color; the soil and rock exploration, sampling, sample handling techniques and procedures; and the disturbed samples, undisturbed samples, soil samplers and soil analysis.

Further this course will also discuss the soil exploration and testing covering soil drilling, soil and rock exploration, in-situ testing and laboratory testing; the swelling phenomenon, swelling potential and pressures and indicator of swell potential; the effect of swelling on structures, stabilization of swelling soils and methods of stabilization; the erosion phenomenon, main factors of erosion, and the methods adapted for erosion control and soil improvement.

During this interactive course, participants will learn the different types of soil cavities, grouting and methods and techniques adopted for soil grouting; the groundwater investigations and geotechnical investigations; the requirements of boring logs/types/layout/depth/specification and interpretation of data obtained from boring logs/soil reports and geotechnical engineer recommendation; the different methods of soil improvement as well as soil compaction, soil cavities, groundwater, wick drain and erosion phenomena; and the data to receive from geotechnical report and types of piles and piles design.

Course Objectives

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

- Apply and gain an in-depth knowledge on soil and geotechnical investigation and soil improvements
- Discuss the fundamentals of soil mechanics, type of soil, different soil and soil classification
- Identify the characteristics of soil covering consistency, apparent density, water content (moisture) and color
- Carryout soil and rock exploration, sampling, sample handling techniques and procedures
- Recognize disturbed samples, undisturbed samples, soil samplers and soil analysis
- Employ soil exploration and testing covering soil drilling, soil & rock exploration, in-situ testing and laboratory testing
- Determine swelling phenomenon, swelling potential & pressures and indicator of swell potential
- Identify the effect of swelling on structures, stabilization of swelling soils and methods of stabilization
- Explain the erosion phenomenon, main factors of erosion, methods adapted for erosion control and soil improvement
- Recognize the different types of soil cavities, grouting and methods and techniques adopted for soil grouting
- Apply groundwater investigations and geotechnical investigations
- Identify the requirements of boring logs/types/layout/depth/specification
- Interpret data obtained from boring logs/soil reports and geotechnical engineer recommendation
- Identify the different methods of soil improvement as well as soil compaction, soil cavities, groundwater, wick drain and erosion phenomena
- Recognize the data to receive from geotechnical report and types of piles and piles design

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 a deeper appreciation and wide understanding of soil & geotechnical investigation and soil improvements for discipline related graduates drawn across the operating companies in the oil and gas industry in Abu Dhabi. The extent of their work experience will depend on how long they have in the CAMS programme and in general terms they are grouped in batches according to assignment level.

Further the curse is designed for delegates will typically hold a bachelor's degree or higher diploma. All will have a reasonable grasp of English. The minimum entry level to the CAMS programme is level 5 on the ADNOC scale of English.

Course Fee

US$ 5,500 per Delegate + **VAT**. 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.

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

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. 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.

- 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. Stan Constantino, MSc, BSc, is a **Senior Petroleum & Reservoir Engineer** with over **30 years** of **Offshore & Onshore** extensive experience within the **Oil**, **Gas & Petroleum** industries**.** His area of expertise include **Reserves & Resources**, **Reserves Estimation & Uncertainty**, **Reservoir** Characterization, **Unconventiona**l **Resource & Reserves** Evaluation, **Oil & Gas Reserves** Estimation, Methods for **Aggregation of Reserves & Resources**, **Fractured Reservoir** Classification & Evaluation, **Sequence Stratigraphy**, **Petrophysics & Rock** Properties, **Seismic** Technology, **Geological** Modelling, **Water Saturation**, **Crude Oil & Natural Gas** Demand, **Exploration Agreements & Financial** Modelling, **Seismic Survey** Evaluation, **Exploration Well** Identification, **Field Production** Operation, **Field Development** Evaluation, Crude Oil Marketing, **Core & Log Data** Integration, **Core Logging**, Advanced **Core & Log Integration**, **Well Logs & Core Analysis**, Advanced Petrophysics/Interpretation of **Cased Hole Logs**, **Cased Hole Formation Evaluation**, **Cased Hole Formation** Evaluation, **Cased Hole Evaluation**, **Cased-Hole Logging**, Applied **Production Logging & Cased Hole & Production Log** Evaluation, **Cased Hole Logging & Formation** Evaluation, Open & Cased Hole Logging, Screening of Oil Reservoirs for **Enhanced Oil Recovery**, **Enhanced Oil Recovery**, **Enhanced Oil Recovery** Techniques, **Petroleum Economic** Analysis, **Oil Industry** Orientation, **Oil Production & Refining**, **Crude Oil Market**, **Global Oil Supply & Demand**, **Global Oil Reserves**, **Crude Oil** Types & Specifications, **Oil Processing**, **Oil Transportation-Methods**, **Oil & Gas** Exploration and Methods, **Oil & Gas** Extraction, Technology Usage in Industrial Security; **Upstream**, **Midstream** & **Downstream Operations**; **Oil Reservoir** Evaluation & Estimation, **Oil Supply & Demand**, **Oil Contracts**, **Government Legislation & Oil Contractual Agreements**, **Oil Projects** & Their Feasibility (revenue and profitability), **Water Flooding**, **Reservoir** Souring & Water Breakthrough, **Reservoir Performance** Using Classical Methods, **Fractured Reservoir** Evaluation & Management, **Reservoir Surveillance** & Management, **Reservoir Engineering** & Simulation, **Reservoir Monitoring**, **Pressure Transient** Testing & **Reservoir** Performance Evaluation, **Reservoir** Characterization, **Reservoir** Engineering Applications with ESP and Heavy Oil, **Reservoir** Volumetrics, Water Drive Reservoir, **Reserve** Evaluation, Rock & Fluid Properties, Fluid Flow Mechanics, PVT Analysis, Material Balance, Darcy's Law & Applications, Radial Flow, **Gas Well** Testing, Natural Water Influx, EOR Methods, Directional Drilling, **Drilling** Production & Operations, Field Development & Production of Oil & Gas, **Wireline Logging**, **Mud Logging**, **Cased Hole Logging**, **Production Logging**, **Slick Line**, **Coil Tubing**, Exploration Wells Evaluation, **Horizontal Wells**, **Well Surveillance**, **Well Testing**, **Design & Analysis**, **Well Testing & Oil Well Performance**, **Well Log Interpretation** (**WLI**), **Formation Evaluation**, **Well Workover Supervision**, **Pressure Transient Analysis** and **Petrophysical Log Analysis**. Currently, he is the **CEO** & **Managing Director** of **Geo Resources Technology** wherein he is responsible in managing the services and providing technical supports to underground energy related projects concerning **field development**, **production**, **drilling**, **reservoir engineering** and **simulation**.

Throughout his long career life, Mr. Stan has worked for many international companies such as the **Kavala Oil**, **North Aegean Petroleum Company** and **Texaco Inc.**, as the **Managing Director**, **Operations Manager**, **Technical Trainer**, **Training Consultant**, **Petroleum Engineering & Exploration Department Head**, **Assistant Chief Petroleum Engineer**, **Reservoir Engineer, Resident Petroleum Engineer**, **Senior Petroleum Engineer** and **Petroleum Engineer** wherein he has been managing the evaluation of exploration wells, reservoir simulation, development training, production monitoring, wireline logging and well testing including selection and field application of well completion methods.

Mr. Stan has a **Master's** degree in **Petroleum Engineering** and a **Bachelor's** degree in **Geology** from the **New Mexico Institute of Mining & Technology** (**USA**) and from the **Aristotelian University** (**Greece**) respectively. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership of Management (ILM**) and a member of the Society of Petroleum Engineers, USA (**SPE**), Society of Well Log Professional Analysts, USA (**SPWLA**) and European Association of Petroleum Geoscientists & Engineers (**EAGE**). Moreover, Mr. Stan published numerous scientific and technical papers and delivered various trainings, courses and workshops worldwide.

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	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0900	***Introduction to Geotechnical Engineering***
0900 – 0930	***Soil Mechanics*** *The Fundamental of Soil Mechanics • Type of Soil • Distinguish between Different Soil • Soil Classification*
0930 – 0945	*Break*
0945 –1145	***Soil Characteristics*** *Consistency & Apparent Density • Water Content (Moisture) • Color • AASHTO Soil Classification System*
1145 – 1245	***Exploration/Sampling of Soil*** *Soil & Rock Exploration • Sampling • Sample Handling Techniques & Procedures*
1245 – 1300	*Break*
1300 –1420	***Exploration/Sampling of Soil (cont'd)*** *Disturbed Samples • Undisturbed Samples • Soil Samplers • Soil Analysis*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Soil Exploration & Testing*** *Soil Drilling • Soil & Rock Exploration • In-Situ Testing • Laboratory Testing*
0930 – 0945	*Break*
0945 – 1000	***Geotechnical Investigation & Testing***
1000 – 1030	***Overview of Geophysical Methods & Applications***
1030 – 1100	***Swelling of Soil*** *Swelling Phenomenon • Identify Swelling Potential & Pressures • Indicator of Swell Potential*
1100 – 1215	***Swelling of Soil (cont'd)*** *Effect of Swelling on Structures • Stabilization of Swelling Soils/Methods of Stabilization*
1215 – 1230	*Break*
1230 – 1420	***Erosion of Soil*** *Erosion Phenomenon • Identifying Main Factors of Erosion • Methods Adapted for Erosion Control & Soil Improvement*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Soil Cavities*** *Different Types of Cavities • Grouting • Methods & Techniques Adopted for Soil Grouting*
0930 – 0945	*Break*
0945 – 1100	***Groundwater Investigations*** *Methods of Determining Groundwater • Measurements of Groundwater • Impact of Groundwater on Stability Analysis • Computation of Bearing Capacity & Settlement • Bearing Capacity, Settlement & Subgrade Modulus, Dynamic Soil Parameters*
1100 – 1215	***Special Topics in Geotechnical Engineering***
1215 – 1230	*Break*
1230 – 1330	***Geotechnical Investigations*** *Significance • Initiation • Planning • Identifying Relevant Requirements in Projects of New Structures & Roads*
1330 - 1420	***Boring*** *Requirements of Boring Logs/Types/Layout/Depth/Specification • Interpreting Data Obtained from Boring Logs/Soil Reports and Geotechnical Engineer Recommendation*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Soil Improvements*** *Different Methods of Soil Improvement • Soil Compaction • Soil Cavities • Groundwater • Wick Drain • Erosion Phenomena*
0930 – 0945	*Break*
0945 – 1045	***Soil Improvements(cont'd)*** *The Data to Receive from Geotechnical Report • Types of Piles & Piles Design • Modulus, Dynamic Soil Parameters • Pile Foundations • Special Types of Piles & Design Methods*
1045 – 1200	***Ground Improvement***
1200 – 1215	*Break*
1215 – 1300	***Special Topics in Geotechnical Engineering***
1300 – 1420	***Soil Seismic Parameters, Liquefaction & Liquefaction Vulnerability Assessment***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

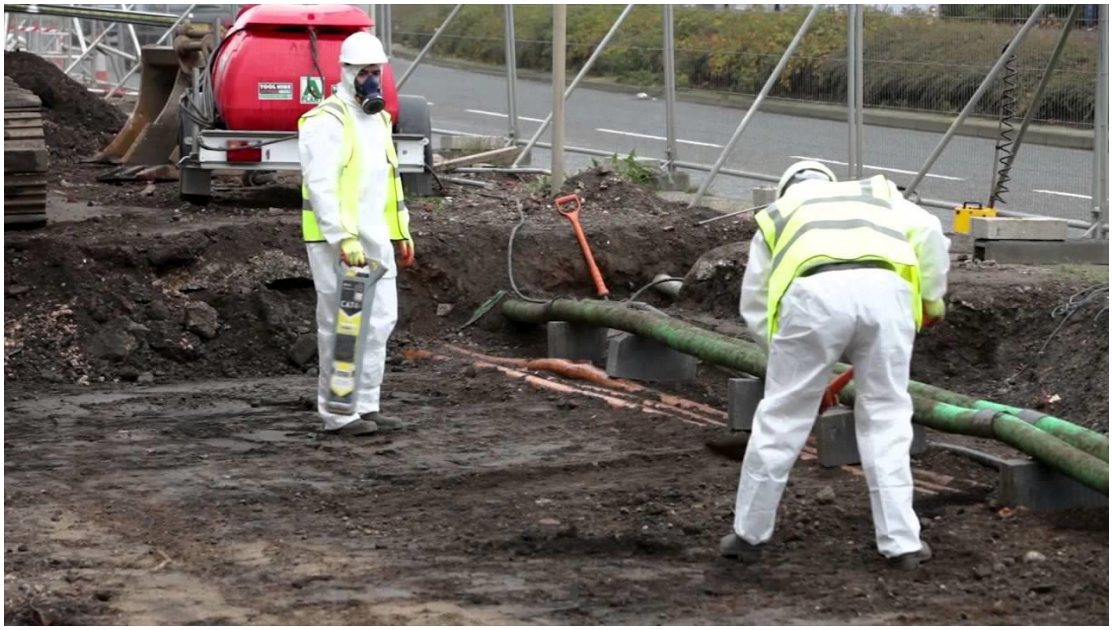
Day 5

0730 – 0830	***Design of Some Ground Improvement Techniques***
0830 – 0930	***Topographic Survey***
0930 – 0945	*Break*
0945 – 1200	***Survey to Detect U/G Utilities – in Unpaved, Concrete Paved & Tile Paved Areas***
1200 – 1215	*Break*
1215 – 1300	***Bathymetry & Met Ocean – Basics, High Level***

1300 – 1345	***Visit to Fugro Yard for Explanation of Drilling Procedure & Field Tests & Visit to Laboratory for Lab***
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This hands-on, highly-interactive course includes the following real-life case studies:-



Course Coordinator

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