COURSE OVERVIEW DE0697
Facies Analysis & Rock Typings (E-Learning Module)

Course Title
Facies Analysis & Rock Typings (E-Learning Module)

Course Reference
DE0697

Course Format & Compatibility
SCORM 1.2. Compatible with IE11, MS-Edge, Google Chrome, Windows, Linux, Unix, Android, IOS, iPadOS, macOS, iPhone, iPad & HarmonyOS (Huawei)

Course Duration
30 online contact hours
(3.0 CEUs/30 PDHs)

Course Description

This E-Learning is designed to provide participants with a detailed and up-to-date overview of facies analysis and rock typings. It covers the meaning of facies and the pre-requisites of geochemical facies analysis; the permanence of the oceans, climatic influences and tectonic influences; the provenance of the sediment, rates of sedimentation, grain size distribution, biological influences and influence of diagenesis and metamorphism; and the methodological prerequisites, sampling, preparation and analysis.

During this course, the participants will learn the environmental and geological evaluation of geochemical analysis data and facies analyses; the results of geochemical facies analyses, hydrofacies and salinity facies; boron, bromine, chlorine, alkalis and earth alkalis including sulphur and isotopes of sulphur, carbon, oxygen, phosphate and organic substances; oxygen facies, temperature facies, litho and biofacies; and the non-chemical methods of facies analysis and the practical use and future importance of geochemical facies analysis.

Course Objectives

After completing the course, the employee will:-

- Apply and gain a comprehensive knowledge on facies analysis and rock typings
- Understand general work-flow for rock-typing
- Supervised electrofacies analysis with discriminant analysis
- Understand techniques for non-supervised electrofacies analysis
- Understand porosity / permeability modeling with various types of regression.
- Understand Capillary pressure curve processing for rock-typing
- Understand reservoir quality indexes.
- Understand work-flows for seismic attribute interpretation using rock-types.
- Discuss the meaning of facies and identify the pre-requisites of geochemical facies analysis
- Explain the permanence of the oceans and differentiate climatic influences vs tectonic influences
- Identify the provenance of the sediment, rates of sedimentation, grain size distribution, biological influences and influence of diagenesis and metamorphism
- Recognize the methodological prerequisites and carryout sampling, preparation and analysis
- Employ environmental and geological evaluation of geochemical analysis data and facies analyses
- Review the results of geochemical facies analyses as well as recognize hydrofacies and salinity facies
- Discuss, boron, bromine, chlorine, alkalis and earth alkalis including sulphur and isotopes of sulphur, carbon, oxygen, phosphate and organic substances
- Describe oxygen facies, temperature facies, litho and biofacies
- Employ non-chemical methods of facies analysis and explain the practical use and future importance of geochemical facies analysis

Who Should Attend

This course provides an overview of all significant aspects and considerations of facies analysis and rock typings for reservoir engineers, managers, oil geologists who want to be able to understand the patterns of sedimentation, and the associated facies, in different environments, and also to learn to apply the basic criteria in facies and architectural reconstruction.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- USA International Association for Continuing Education and Training (IACET)

  Haward Technology is an Authorized Training Provider by the International Association 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 1-2013 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 1-2013 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 Association 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.

- 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.

Course Fee

As per proposal

Training Methodology

This Trainee-centered course includes the following training methodologies:-

- Talking presentation Slides (ppt with audio)
- Simulation & Animation
- Exercises
- Videos
- Case Studies
- Gamification (learning through games)
- Quizzes, Pre-test & Post-test

Every section/module of the course ends up with a Quiz which must be passed by the trainee in order to move to the next section/module. A Post-test at the end of the course must be passed in order to get the online accredited certificate.

Course Contents

- Introduction
- The Meaning of Facies
- Prerequisites of Geochemical Facies Analysis
- Permanence of the Oceans
- Climatic Influences
- Tectonic Influences
- Provenance of the Sediment
- Rates of sedimentation
- Grain Size Distribution
- Biological Influences
- Influence of Diagenesis and Metamorphism
- Methodological Prerequisites
- Sampling
- Preparation and Analysis
- Environmental Evaluation of Geochemical Analysis Data.
- Geological Evaluation of Geochemical Facies Analyses
- Results of Geochemical Facies Analyses
- Hydrofacies
- Salinity Facies
- Boron, Bromine, Chlorine, Alkalis and earth alkalis, Sulphur and isotopes of sulphur,Carbon and Oxygen, Phosphate, Organic substances

- Oxygen Facies
- Temperature Facies
- Litho and Biofacies
- Non-Chemical Methods of Facies Analysis
- Practical Use and Future Importance of Geochemical Facies Analysis