

**COURSE OVERVIEW DE0441(AD6)**

**Advanced Pressure-Volume-Temperature (PVT) Data Validation**

**Course Title**

Advanced Pressure-Volume-Temperature (PVT)  
Data Validation

**Course Date/Venue**

Session 1: May 12-16, 2025/Fujairah Meeting  
Room, Grand Millennium Al Wahda  
Hotel, Abu Dhabi, UAE

Session 2: November 02-06, 2025/Boardroom 1,  
Elite Byblos Hotel Al Barsha, Sheikh  
Zayed Road, Dubai, UAE



**Course Reference**

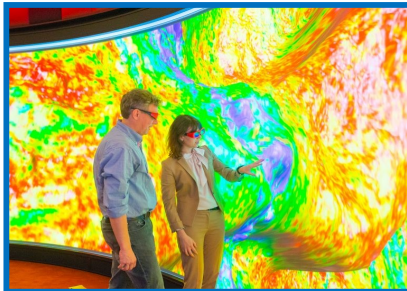
DE0441(AD6)

**Course Duration/Credits**

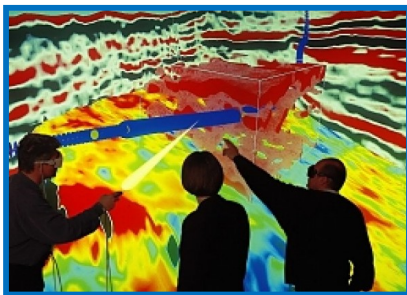
Five days/3.0 CEUs/30 PDHs



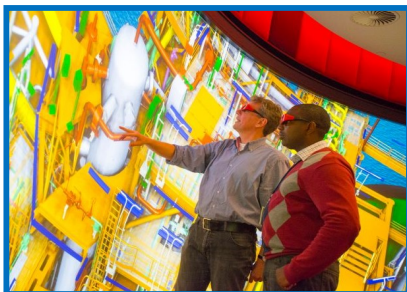
**Course Description**



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



The drilling in new fields is planned to start in early 2013, where one of the objectives of the first well is data gathering and especially fluid sampling that enables engineers to deliver a proper fluid characterization (from sampling to EOS characterization). This course will enable the participants to ensure optimum sampling strategy, strong laboratories follow-up capabilities and high-quality EOS characterization.



This course is designed to provide participants with a detailed and up-to-date overview of advanced pressure-volume-temperature (PVT) simulation. It covers the fluid phase behavior and basic fluid properties; the PVT measurements and sampling methods; the EOS models as well as how to properly characterize the plus fraction and tune EOS; and the process of lumping and de-lumping.

During this interactive course, participants will learn the PVT data for reservoir simulation; the miscible process and how is it modeled; the quality checking of the data provided by vendors; and the appropriate regressing methods on how to develop a PVT model (EOS) that match the available data.

### Course Objectives

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

- Apply and gain an advanced knowledge on pressure-volume-temperature (PVT) simulation
- Discuss fluid phase behavior and basic fluid properties
- Perform PVT measurements and sampling methods
- Recognize EOS models as well as how to properly characterize the plus fraction and tune EOS
- Identify and discuss process of lumping and de-lumping
- Prepare PVT data for reservoir simulation
- Explain the miscible process and how is it modeled
- Demonstrate quality checking of the data provided by vendors
- Determine appropriate regressing methods on how to develop a PVT model (EOS) that match the available data

### 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 advanced pressure-volume-temperature (PVT) simulation for reservoir engineers and petroleum engineers who have a medium background of PVT.

### 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: -

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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**. 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 Fee**

**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. Yasser Almasood** is a **Senior Petroleum Engineer** with almost **20 years** of industrial experience within the, **Oil & Gas, Refinery** and **Petrochemical** industries. His wide expertise covers in the areas of **Gas Condensate Reservoir Management, Gas Condensate Fields Development, Hydrocarbon Reservoir, Production Operations, Process Reactor Operation & Troubleshooting, Catalytic Reactors, Heat Exchanger, Distillation Columns, Pumps, Distributed Control System (DCS), Catalytic Reformer Unit, Polymerization, Dehydrogenation, Gas Processing Plant Operations & Control, Gas Processing Monitoring & Troubleshooting, Process Plant Start-up Commissioning & Troubleshooting, Process Plant Optimization & Energy Conservation, Process Equipment Design & Troubleshooting, Advanced Operation Skills, Refinery Process Yield Optimization, Oil & Gas Processing, Troubleshooting Oil & Gas Processing Facilities, Polymers & Polymerization, Applied Process Engineering, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Performance & Efficiency, Flare Blowdown & Pressure Relief Systems, Polypropylene Manufacturing, Polyethylene & Process Troubleshooting, Ammonia, Ethylene, Solvents, Gas Feed, EDC, VCM, PP, PVC, Chlorine, Fluidized Bed Reactor, Oil Movement & Storage, Power Plant Chemistry, Catalyst Manufacturing Techniques, Fuel Systems Management, Process Design & Optimization, Desalination Processes, Reverse Osmosis and Molecular Sieves.** Further, he is also well-versed in **HAZOP, Advanced Process Hazard Analysis, Safety Management, Environmental Safety Management, LOPA & SIL, Process Safety Management (PSM), Incident investigation & Root Cause Analysis, Emergency & Crisis Management, Safety Audit & Site, Inspection, Inspection of Fire Equipment & Tools, Fire Protection & Prevention, Worker Protection from Radiation Work Permits, IGC International General Certificate in Occupational Safety & Health, Risk Assessment, Risk Associated with Low Level Radiation Exposure, Hydrogen Sulfide (H<sub>2</sub>S) Safety, Personal Protective Equipment, Lock-Out & Tag-Out, OSHA Occupational Safety & Health, Radiation & Contamination, Scientific Notation, Exposure Rate & Shielding Calculations, Excavations & Trenching, Permit-to-Work, Aspentech, Aspen HYSYS, Pro II, exSILentia, OLGA, Flare System Analyzer, Aspen PIMS, DYN SIM, RiskWISE, MS Office and IBM Maximo.**

During his career life, Mr. Yasser has gained his practical and field experience through his various significant positions and dedication as the **Senior Process Engineer, Process Engineer, Oil & Gas Process & Safety Instructor, On-Job Instructor, Process Senior Operator, Acting DCS Operator** and **Shift Controller** for various multi-national companies such as the **ADNOC Gas Processing (GASCO), Conoco Phillips Gas Plant** and **Syrian Gas Company (SGC).**

Mr. Yasser has a **Bachelor's degree in Petroleum Engineering.** Further, he is a **Certified Instructor/Trainer, a Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management (ILM)** and has further delivered numerous training, courses, workshops, seminars and conferences worldwide.

**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	<i>Fluid Phase Behavior</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Fluid Phase Behavior (cont'd)</i>
1100 – 1215	<i>Basic Fluid Properties</i>
1215 – 1230	<i>Break</i>
1230 – 1420	<i>Basic Fluid Properties (cont'd)</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

**Day 2**

0730 – 0930	<i>PVT Measurements</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>PVT Sampling Methods</i>
1100 – 1215	<i>EOS Methods</i>
1215 – 1230	<i>Break</i>
1230 – 1420	<i>How to Properly Characterize the Plus Fraction</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>

**Day 3**

0730 – 0930	<i>How to Tune an EOS</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>How to Tune an EOS (cont'd)</i>
1100 – 1215	<i>Process of Lumping</i>
1215 – 1230	<i>Break</i>
1230 – 1420	<i>Process of De-Lumping</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Three</i>

**Day 4**

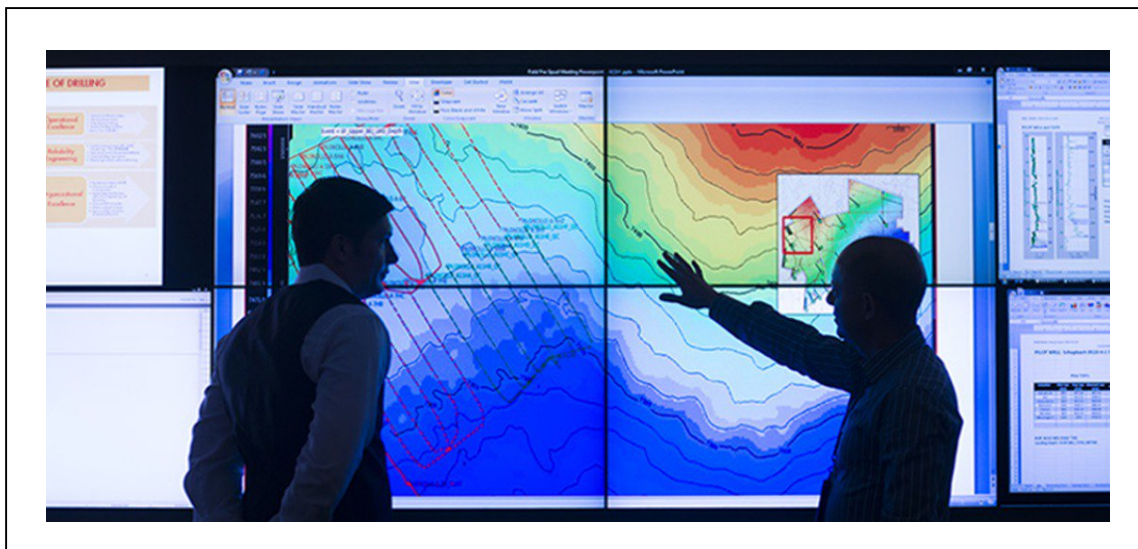
0730 – 0930	<i>How to Prepare PVT Data for Reservoir Simulation</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>How to Prepare PVT Data for Reservoir Simulation (cont'd)</i>
1100 – 1215	<i>Understanding the Miscible Process and How is it Modeled</i>
1215 – 1230	<i>Break</i>
1230 – 1420	<i>Proper Planning of a PVT Study Including Sampling Strategy</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Four</i>

**Day 5**

0730 – 0930	<i>Quality Check of the Data Provided by Vendors</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Quality Check of the Data Provided by Vendors (cont'd)</i>
1100 – 1215	<i>Appropriate Regressing Methods on How to Develop a PVT Model (EOS) that Match the Available Data</i>
1215 – 1230	<i>Break</i>
1230 – 1345	<i>Appropriate Regressing Methods on How to Develop a PVT Model (EOS) that Match the Available Data (cont'd)</i>
1345 – 1400	<i>Course Conclusion</i>
1400 – 1415	<b>POST-TEST</b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>

**Practical Sessions**

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



**Course Coordinator**

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