

CUSTODY & ALLOCATION METERING

“Ensure Accuracy, Compliance, and Revenue Assurance in Oil & Gas Metering Systems.”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Custody and allocation metering play a critical role in the oil and gas industry, as they directly impact financial transactions, compliance, and operational accountability. This in-depth 5-day training course provides participants with the technical, regulatory, and operational knowledge necessary to manage metering systems used in custody transfer and production allocation. It covers standards (API, ISO), flow measurement principles, meter types, calibration, auditing, and error mitigation.

Objectives

By the end of this course, participants will be able to:

- Understand the principles and importance of custody and allocation metering
- Differentiate between types of flow meters and their application
- Apply international standards and regulatory requirements (e.g., API, ISO)
- Conduct meter proving, calibration, and performance evaluation
- Mitigate measurement uncertainty and ensure data integrity
- Interpret metering audit reports and maintain compliance

Why Attend

Accurate measurement is vital for financial accountability and dispute prevention in oil and gas operations. This course enhances your capability to oversee, audit, and improve metering systems across upstream, midstream, and downstream activities.

Target Audience

- Measurement and Instrumentation Engineers
- Oil & Gas Operators and Supervisors
- Metering Technicians and QA/QC Inspectors
- Pipeline Engineers and Terminal Managers
- Production Accountants
- Regulatory and Compliance Officers

Individual Benefits

- Build deep expertise in custody and allocation metering standards
- Improve technical skills in calibration, proving, and audit practices
- Minimize losses through enhanced measurement accuracy
- Increase value to your organization through regulatory compliance

Organizational Benefits

- Ensure fair trade through accurate custody transfer
- Minimize disputes with partners and regulators
- Improve operational accountability and fiscal reporting
- Reduce measurement uncertainty and operational risks

Instructional Methodology

- Instructor-led technical sessions
- Case studies from oil and gas operations
- Hands-on exercises and flow calculations
- Interactive discussions and group problem solving
- Use of industry-standard tools and templates

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

DAY 1 - FUNDAMENTALS OF METERING

- Module 1: Introduction to Flow Measurement & Metering Terminology (07:30 – 09:30)
- Module 2: Custody Transfer vs Allocation Metering (Regulatory Frameworks) (09:45 – 11:15)
- Module 3: Overview of International Standards (API, ISO, AGA) (11:30 – 01:00)
- Module 4: Basic Flow Dynamics & Measurement Technologies (02:00 – 03:30)

DAY 2 - METER TYPES & MEASUREMENT PRINCIPLES

- Module 1: Positive Displacement & Turbine Meters (07:30 – 09:30)
- Module 2: Ultrasonic & Coriolis Flowmeters – Technology & Application (09:45 – 11:15)
- Module 3: Differential Pressure & Vortex Meters (11:30 – 01:00)
- Module 4: Case Study: Selecting the Right Meter for the Application (02:00 – 03:30)

DAY 3 - METER CALIBRATION, PROVING & ERROR MANAGEMENT

- Module 1: Principles of Meter Proving and Calibration (07:30 – 09:30)
- Module 2: Types of Provers (Ball, Piston, Small Volume) (09:45 – 11:15)
- Module 3: Uncertainty Analysis and Error Handling (11:30 – 01:00)
- Module 4: Hands-On Exercise: Uncertainty & Calibration Calculations (02:00 – 03:30)

DAY 4 - ALLOCATION, DATA MANAGEMENT & AUDITING

- Module 1: Allocation Methodologies: Volumetric & Mass Balance (07:30 – 09:30)
- Module 2: SCADA Integration, Data Acquisition & Reconciliation (09:45 – 11:15)
- Module 3: Audit Trails, Reporting, and Regulatory Compliance (11:30 – 01:00)
- Module 4: Group Exercise: Simulated Metering Audit & Analysis (02:00 – 03:30)

DAY 5 - ADVANCED TOPICS & CASE STUDIES

- Module 1: Leak Detection Systems & Flow Assurance (07:30 – 09:30)
- Module 2: Digital Metering & IIoT in Oil & Gas Measurement (09:45 – 11:15)
- Module 3: Dispute Resolution in Custody Transfer (11:30 – 01:00)
- Module 4: Final Project: Design & Review of Custody Metering Systems + Wrap-Up (02:00 – 03:30)

Certification

Participants will be awarded a Certificate of Completion in Custody & Allocation Metering, validating their proficiency in applying industry best practices, standards, and technologies in flow measurement and metering operations.

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