

ISHM 2025 CLASS SCHEDULE													
Presentation Class Session													
Class Level	Tuesday, May 13th				Wednesday, May 14th				Thursday, May 15th				
Period	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3
Room #	11:10 AM to 12:00 PM 41102	1:20 PM to 2:10 PM 13101	2:20 PM to 3:10 PM 14101	4:10 PM to 5:00 PM 33305	8:00 AM to 9:50 AM 130003	9:00 AM to 11:40 AM 43107	10:50 AM to 12:00 PM 120001	1:20 PM to 2:10 PM 53002	2:20 PM to 3:10 PM 71003	4:10 PM to 5:00 PM 51501	8:00 AM to 8:50 AM 74005	9:00 AM to 9:50 AM 53002	10:50 AM to 11:40 AM
103	Witnessing Orifice Meter Verification / Calibration	Fundamentals of Ultrasonic Gas Measurement	Mass Meters for Gas Measurement	RF (Radio Frequency) Fundamentals of IoT	Understanding Hazardous Area Classifications	Using Control Charts to Predict Failures of Measurement Devices	Overview of GPA 2172/API 14.5 Revision	Energy Measurement Using Ultrasonic Meters and Gas Chromatography	Benefits around Timely Analysis of Measurement Data	Sample Conditioning & Contaminant Removal for Water Vapor Determination	Establishing a Development Program for Hydrocarbon Measurement Staff	Impact of Hydrogen Blending on Natural Gas Analysis	No Class
104	Refined Product Sampling Systems	API MPMS Chapter 22.2 Testing Protocol for Differential Pressure Flow Measurement Devices	Improvement of Historic Proving Practice through API MPMS Chapter 13 Statistical Methods	Estimating Measurement Uncertainty for Gas Flow Meters	LNG Measurement by Static and Dynamic Methodologies Panel (Hour 1 of 2)	LNG Measurement by Static and Dynamic Methodologies Panel (Hour 2 of 2)	Overview of Changes to API 2350 Tank Overfill Protection	Measurement Policies and Procedures - Development and Implementation Considerations	Auditing Gas Laboratories	Design, Operation and Maintenance of LACT Units	Multiphase Flow Measurement	Dynamic Measurement and Proving in LNG Systems	No Class
105	Production Equipment Effects on Gas Measurement	Fluid Volume Calculations	Cyber Security	Orifice Meter Diagnostic Systems	Preparing a Prover for Waterdraw Calibration	Auditing Electronic Gas Measurement per API Chapter 21.1	Effects of Atmospheric Pressure on Gas Measurement	Determination of Trace Oxygen in Natural Gas	The Uncertainty of a Waterdraw Calibration vs. Gravimetric Calibration on Small Volume Provers	Master meter prover certifications per API MPMS 4.9.3	Application in Liquid Measurement Using Clamp-On Ultrasonic Technology	Carbon Dioxide Measurement Experience	Sample System Field Certification Data Analysis and Troubleshooting
106	Measurement Station Inspection Documentation Program and Guide	Basic Electronics for the Field Technician	Liquid Tank Level - Interface Measurement	Sampling and Conditioning of Natural Gas Containing Entrained Liquids	Best Practices for the Design of Gas Metering Systems for Custody Transfer	Interface Detection in Liquid Pipelines	Measurement and Regulation Operation of a LDC	Methods for Certifying Measurement Equipment	PID Control Implementation in Electronic Flow Computers	Sampling and Analysis for RNG	Spread Spectrum Radio Technology for Gas Measurement	Wet Gas Measurement	Uncertainties within Centrifuge Methods and Mitigations
201	Mass Meters for Liquid Measurement	Guidelines for Pipeline Fill, Pack, and Determination Methodology	Displacement Meters for Liquid Measurement	Engineering Ethics	BTU Analysis Using a Gas Chromatograph	Guide to Troubleshooting Problems with Liquid Meters and Provers	Determination of H2S and Total Sulfur in Natural Gas	Evaporation Loss Measurement from Storage Tanks	Helical Turbine Meters for Liquid Measurement	Understanding How to Apply GPA 2145, to Determine Gas to Liquid and Liquid to Gas Equivalents	Uncertainty Considerations of Tank Static Measurement System	SCADA and Field Data Capture in the Cloud	Effects of Petroleum Properties on Pipeline Measurement
202	Measurement of Petroleum on board Marine Vessels	Fundamentals of Gas Turbine Meters	Causes and Cures of Regulator Instability	An Optical Hydrocarbon Analyzer for On-Line Hydrocarbon Gas Speciation and Measurement	Hydrocarbon Dew Point Effects on Gas Flow Measurement	Moisture Measurement Using Laser Spectroscopy	Moisture Measurement using Pipeline Monitoring through Digitalization: Process Cameras and Real-Time Visual Data for Metering	Testing, Maintenance and Operation of Electronic Flow Computers for the Gas Industry	Selection, Sizing and Operation of Control Valves for Gases and Liquids	Operation and Problems Associated with Prover Detector Switches	Offshore Liquid FPSO Measurement Systems	Identifying and Eliminating Effects of Induced Signals from Measurement System Electronics	Water Vapor Effects on Natural Gas Quality and Natural Gas Measurement
203	Fundamentals of Liquid Turbine Meters	The "Not So Small" Small Volume Prover	Production and Productivity Optimization Through Wireless Sensing	Flow Conditioning for Fluid Flow Measurement	LACT Unit Proving - The Role of the Witness	Effects of Abnormal Conditions on Accuracy of Orifice Measurement	Field and Laboratory Testing of Sediment and Water in Crude Oil	Compressibility of Natural Gas	Fundamentals of Low Pressure Gas Rotary Metering	Allocations 201-Principles of Allocations	Thermometry in Gas Measurement	Leveraging Mag Meter Diagnostics to Understand Flow Process, and Performance	Coping with Changing Flow Requirements at Existing Meter Stations
204	BTU Determination of Natural Gas Using a Portable Chromatograph	Conventional Measurement in Unconventional Plays	Material Loss Control in Refineries and Petrochemical Plants	Discipline of Sizing SVP for All Metering Technologies	Challenges in Allocation Measurement Panel (Hour 1 of 2)	Challenges in Allocation Measurement Panel (Hour 2 of 2)	Calibration Transferability for Coriolis Mass Flow Meters	Crude Oil Gathering - Gauging Testing and Truck Measurement Alternatives (Hour 1 of 2)	Crude Oil Gathering - Gauging Testing and Truck Measurement Alternatives (Hour 2 of 2)	Small Scale LNG Measurement	Ultrasonic Meters and Measurement Accuracy in Leak Detection	The Evolution of Technologies in H2O and H2S Measurement	Data Validation - Requirements of an EGM Editor
208A	Fundamentals of Gas Measurement I	Fundamentals of Gas Measurement II	Fundamentals of Gas Measurement III	Advanced Diagnostic Measurements and Verification with Coriolis Flow meters	Fundamentals of Gas Measurement I	Fundamentals of Gas Measurement II	Fundamentals of Gas Measurement III	Proving Coriolis Flow Meters Panel (Hour 1 of 2)	Proving Coriolis Flow Meters Panel (Hour 2 of 2)	Determination of Water Vapor Content in Natural Gas	Real Time Component Volume Calculations for Natural Gas Liquid Measurement	Ultrasonic Meters for Liquid Measurement	Measurement Scene Investigations
208B	Determination of Hydrocarbon Dew Point in Natural Gas (Hour 1 of 2)	Determination of Hydrocarbon Dew Point in Natural Gas (Hour 2 of 2)	Troubleshooting Liquid Pipeline Losses and Gain (Hour 1 of 2)	Troubleshooting Liquid Pipeline Losses and Gain (Hour 2 of 2)	Resolving Liquid Measurement Differences	Artificial Intelligence - Data Capture and Back-Office Measurement Applications	Calibration of Liquid Provers	Review & Discussion of BLM Orders 3173, 3174, & 3175 (Hour 1 of 2)	Review & Discussion of BLM Orders 3173, 3174, & 3175 (Hour 2 of 2)	The Role of BLM in Oil and Gas Measurement	Installation and Operation Errors in Gas Measurement	Orifice Meter Tube Fabrication Shop Inspection Program	PID Pressure Control Implementation and Tuning in Electronic Flow Computers
209A	Measurement Economics	Auditing Liquid Measurement	New Ideas in Measurement (Hour 1 of 2)	New Ideas in Measurement (Hour 2 of 2)	Fundamentals of Liquid Measurement I - Physical Properties (Repeat Class)	Fundamentals of Liquid Measurement II - Static (Repeat Class)	Fundamentals of Liquid Measurement III - Dynamic (Repeat Class)	The Measurement Data Handling Process-Now and in the Future	Calculation of Liquid Petroleum Quantities	Understanding Liquid Meter Proving and Proving Reports	Verification / Calibration of Devices Used in Liquid Measurement	Estimating Measurement Uncertainty for Gas Flow Meters (Repeat Class)	In-Situ (On-Site) Gas Meter Proving
209B	Fundamentals of Liquid Measurement I - Physical Properties	Fundamentals of Liquid Measurement II - Static	Fundamentals of Liquid Measurement III - Dynamic	Measurement Accounting Overview	Liquid Meter Proving Techniques	Introduction to Uncertainty in Measurement	Liquid Measurement Station Design	On-line Flow Computers for Liquid Custody Transfer	Liquid Flow Provers	Statistical Control of Meter Factors - A Simplified Approach	Crude Oil Blending	Improving Flow Measurements with Improved Calibration & Data Handling Procedures	Operational Experience with Liquid Coriolis Meters
301A	Effects and Control of Pulsation in Gas Measurement	Flare Measurement Practices	Oxidation in Natural Gas	Measurement Analyst Training for a Liquid System	Real-Time Electronic Gas Measurement	Viscosity and its Application in Liquid Hydrocarbon Measurement	No Class	Fundamentals of Sampling Natural Gas for BTU Determination	On-line Water Measurement Devices in Liquid Service	DOT Requirements for the Transportation of Sample Containers	Loading of Crude into Rail Tank Cars	Orifice Meters - Operation and Maintenance	No Class
301B	New Technologies in S&W Measurement	Pycnometer Installation, Operation and Calibration	Sampling Challenges Associated With Unconventional Gas Sources	Setting up effective system balances	Program for Training a Gas Measurement Technician	Manufactured Meter Pulses - An Explanation	Mass Measurement of Natural Gas Liquid Mixtures	Updates on API, AGA, GPA and ASTM Standards - Measurement Activities (Hour 1 of 2)	Updates on API, AGA, GPA and ASTM Standards - Measurement Activities (Hour 2 of 2)	Simplifying Real-time and Historical (EFM) Data Collection for the Oil & Gas Industry	No Class	Uncertainty Based Transmitter Verification	No Class
301C	SCADA Systems	Basics of High Pressure Measuring and Regulating Station Design	Proving Liquid Meters with Microprocessor Based Pulse Outputs	Crude Quality - What is Involved and Why it's Important	The Evolution of Data Collection for Gas Measurement	Over Pressure Protection Methods	Reducing Measurement Uncertainty in Process Gas Quality Measurements	Certification and Performance Testing of Automatic Samplers	Advanced Application of Liquid Flow Computers	Flow Conditioner for Orifice Measurement	Measurement Accuracy and Sources of Error in Tank Gauging	Techniques of Gas Composite Sampling	Transient Lightning Protection for Electronic Measurement Devices
301D	Crude Oil Sampling for Custody Transfer Panel (Hour 1 of 2)	Crude Oil Sampling for Custody Transfer Panel (Hour 2 of 2)	Smart Transmitter Selection, Calibration and Installation	Installation and Operation of Densitometers	Application of Turbine Meters in Liquid Measurement	Chromatograph Applications and Problems from the User's Standpoint	Marine Crude Oil Terminal Measurement Systems	Measurement Methods for Liquid Storage Tanks	Determination of Lost and Unaccounted for Gas	Orifice Fittings and Meter Tubes	Communication Systems for Gas Measurement Data	Energy Measurement using Flow Computers and Chromatography	No Class
302A	Fundamentals of Gas Chromatography	Flow Calibrating Ultrasonic Gas Meters	Contaminant Accumulation Effect on Gas Ultrasonic Flow Meters	Gas Ultrasonic Diagnostics	Chromatograph Maintenance and Troubleshooting	Flare Measurement Using Advanced Ultrasonic Technology	Theory and Application of Pulse Interpolation to Prover Systems	Data Averaging	Design Considerations for Analyzer Enclosure Systems	Roles and Responsibilities of Witnessing a Prover Calibration	Application of Flow Computers for Gas Measurement and Control	Techniques of Gas Spot Sampling	Automated Truck Loading Systems
302B	Gas Meter Selection	Leak Detection on Petroleum Pipelines	ESG and GHG Measurement and Impact of Federal and State Air Regulations on Measurement of Emissions and Flaring	Basic Applications for Flow Computers and Telemetry Systems	Large Scale LNG Measurement	Condition-Based Monitoring of Natural Gas Ultrasonic Measurement Facilities	Sampling and Analysis for RNG	Overview of Revised API Chapter 5.6 Liquid Coriolis Meters (Panel)	Proving Liquid Ultrasonic Meters	Ethernet for SCADA Systems	Measurement Data Analytics in the Age of Machine Learning	Operational Experience with Small Volume Provers	OPC Fundamentals
302C	Measurement Analyst Training for a Gas System	Chromatographic Analysis of Natural Gas Liquids	Measurement Management Systems	Understanding the Volume Correction Factor used in measurement systems	Financial Models of Gas Systems	Investigating LAUF	Lies, Damned Lies, and statistics of Flow Meter Linearization	Introductions to Industry Standards	Measurement System Auditing Class 1 of 2	Measurement System Auditing Class 2 of 2	Reducing the uncertainty of hydrocarbon dewpoint calculations using a c9+ analysis	No Class	No Class
Hands-On Class Session													
Period	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3
Room #	967.1	929.3	929.4	971.1	946.1	946.2	920.1	969.1	937.1	977.1	952.1	936.1	
205A	Schneider-Electric - Foxboro Production Vortex Meters	Omni - Omni Flow Computers (Hour 1 of 2) (Repeat Class)	Omni - Omni Flow Computers (Hour 2 of 2) (Repeat Class)	ZEGAZ Instruments - ZEGAZ Instruments Automated Chilled-Mirrors	Quorum Software - FLOWCAL Measurement Software (Hour 1 of 2)	Quorum Software - FLOWCAL Measurement Software (Hour 2 of 2)	Micro Motion - Micro Motion Gas Coriolis Meters	Mustang Sampling - Mustang Sampling Pony Box and P-53 Units	Ametek - Ametek Dead Weight Tester	TMC - SureShot Orifice Fitting Operation and Maintenance	Endress+Hauser - Endress + Hauser Coriolis Flowmeter Best Practices	Quorum Software - PROVEIt and PYSI Meter Proving Software	Brodie International - Positive Displacement Meters
205B	YZ Systems - YZ Odorization	Micro Motion - Micro Motion Liquid Coriolis Meters (Hour 1 of 2)	Micro Motion - Micro Motion Liquid Coriolis Meters (Hour 2 of 2)	Emerson - Rosemount Tank Gauging	KGM Inc. - Mooney-Pilot Operated Regulators (Hour 1 of 2)	KGM Inc. - Mooney-Pilot Operated Regulators (Hour 2 of 2)	RJ Machining - Manifold and Stabilizer Installation	Schneider Electric - Realflo Software For Scadaflow Flow Computers (Hour 1 of 2)	Schneider Electric - Realflo Software For Scadaflow Flow Computers (Hour 2 of 2)	Siemens - Siemens Clamp-On Ultrasonic Meter	Endress+Hauser - Endress + Hauser Electromagnetic Flowmeter Best Practices	Barracuda Measurement Solutions - ModuleX Liquid Flow Computer	KGM Inc. - Dresser Rotary Meters
206A	Fisher Controls - Fisher Control High Pressure Regulators	Schneider Electric - Accutech Wireless Instrumentation	Rosemount Analytical - Gas Chromatograph Configuration (Hour 1 of 2)	Rosemount Analytical - Gas Chromatograph Configuration (Hour 2 of 2)	ABB Totalflow - NGC/IPC 1000 Gas Chromatograph (Hour 1 of 2)	ABB Totalflow - NGC/IPC 1000 Gas Chromatograph (Hour 2 of 2)	Quorum Software - TESTIt Meter Calibration Software	Thermo Scientific - AutoFLEX Flow Computer (Hour 1 of 2)	Thermo Scientific - AutoFLEX Flow Computer (Hour 2 of 2)	A+ Corporation - Gense Sample Probes and Membrane Separators	ABB Totalflow - ABB Xseries Flow Computers (Hour 1 of 2)	ABB Totalflow - ABB Xseries Flow Computers (Hour 2 of 2)	Daniel - Daniel Liquid Turbine Meters
206B	TechnipFMC - TechnipFMC-Invalco BS&W Monitor	Guidant - ACCULOAD Family Preset Controller (Hour 1 of 2)	Guidant - ACCULOAD Family Preset Controller (Hour 2 of 2)	Mustang Sampling - Mustang Sampling-OMA300 Process Analyzer	Emerson - DeltaV FB3000 RTU Overview & Configuration (Hour 1 of 2)	Emerson - DeltaV FB3000 RTU Overview & Configuration (Hour 2 of 2)	PGI - PGI Interceptor Composite Sampler O&M	Omni - Omni Flow Computers (Hour 1 of 2)	Omni - Omni Flow Computers (Hour 2 of 2)	Emerson - DeltaV FB3000 RTU Custom Display Builder	TechnipFMC - TechnipFMC-Invalco BS&W Monitor (Repeat Class)	YZ Systems - YZ Natural Gas Sampler O&M	Guidant - Guidant Liquid Positive Displacement Meters
207A	Temposonica - Automatic Tank Gauging Magnetostrictive Technology	Endress+Hauser - TDLAS H2O Analysis (Hour 1 of 2)	Endress+Hauser - TDLAS H2O Analysis (Hour 2 of 2)	Sensia Global - Sensia Crude Oil Sampling	CRT Services - Spirit IT Flow Computers (Hour 1 of 2)	CRT Services - Spirit IT Flow Computers (Hour 2 of 2)	Fleish - Flexim Clamp On Ultrasonic Meters	Emerson - Rosemount Ultrasonic Meters (Hour 1 of 2)	Emerson - Rosemount Ultrasonic Meters (Hour 2 of 2)	Emerson - Rosemount Tank Gauging (Repeat Class)	SICK, Inc. - FLOWSICS500 Ultrasonic Meter (Hour 1 of 2)	SICK, Inc. - FLOWSICS500 Ultrasonic Meter (Hour 2 of 2)	A+ Corporation - ACES Sample System Design, Installation and Maintenance
207B	Vinson Process - Fisher Control Valves	SICK, Inc. - SICK Gas Ultrasonic Meters (Hour 1 of 2)	SICK, Inc. - SICK Gas Ultrasonic Meters (Hour 2 of 2)	Rosemount - Rosemount Smart Transmitters	Circle B - Orifice Tube and Fitting Inspection (Hour 1 of 2)	Circle B - Orifice Tube and Fitting Inspection (Hour 2 of 2)	Guidant - Guidant Turbine Meter Diagnostic Tool	Emerson - Emerson FB Series Flow Computers Configurations & Troubleshooting (Hour 1 of 2)	Emerson - Emerson FB Series Flow Computers Configurations & Troubleshooting (Hour 2 of 2)	Flow MD - Witnessing Prover Calibrations (Gravimetric Method)	Flow MD - Flow MD Small Volume Provers (Hour 1 of 2)	Flow MD - Flow MD Small Volume Provers (Hour 2 of 2)	- NO CLASS
Bathroom A	Gas Fundamentals Track (Requires Additional Registration Fee)												