

# e-Learning & Knowledge Solutions

Innovative on-demand solutions to effectively solve your skills training needs.



Oil & Gas Business | Petroleum Online



Upstream Petroleum Technology | IPIMS



Operations & Maintenance



Business Essentials



Clean Energy & Sustainability

# Inspired, Innovative, Instructional.

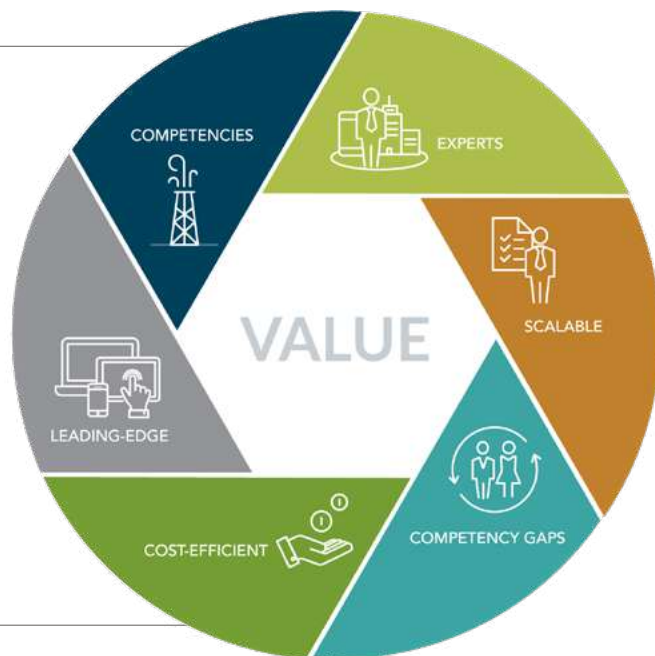
Our comprehensive e-Learning Solutions bring you innovative on-demand courses to effectively solve your skills training needs. These comprehensive products cover industry-specific content and business essentials in all key aspects of the international oil and gas industry.

IHRDC has been the energy industry's go-to training leader and innovator for more than half a century. We are a proven advocate for our clients, and we remain committed to designing, producing, and publishing enhanced solutions and new programs to meet the industry's evolving needs.


## Our e-Learning Solutions Offer You Unparalleled Value

IHRDC's e-Learning systems propel talent development in the energy sector. On their own or blended with other training formats, our e-Learning products deliver consistent and effective training solutions for your employees.

- Aligned with Industry-Specific Competencies
- Developed by Industry Leading Experts
- Offer Scalable and In-Depth Learning
- Quickly Close Competency Gaps
- Deliver Cost-Efficiency
- Rely on Leading-Edge Technology and Support



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## Upstream Petroleum Technology | IPIMS

### ► Background Learning

PETROLEUM GEOLOGY 

PETROLEUM GEOPHYSICS 

PETROLEUM ENGINEERING 

FORMATION EVALUATION 

MULTI-DISCIPLINARY 

### ► Action Learning

EXPLORATION 

RESERVOIR MANAGEMENT 

DRILLING AND WELL COMPLETION 

PRODUCTION ENGINEERING AND OPERATIONS 



## Operations & Maintenance



FUNDAMENTALS



HSE



MAINTENANCE



OPERATIONS



## Business Essentials



BUSINESS



FINANCE AND ACCOUNTING



IT AND INSTRUCTIONAL DESIGN



PERSONAL DEVELOPMENT



PROJECT MANAGEMENT



## Clean Energy & Sustainability



ENERGY TRANSITION



HYDROGEN



# Athena Microlearning



Delivering short, 5- to 8-minute learning sessions with rich nuggets of content, Athena Microlearning offers on-demand access and a responsive design on any device.

## Learning Pathways



### By Discipline

► Operations & Maintenance

- MECHANICAL MAINTENANCE
- ELECTRICAL MAINTENANCE
- INSTRUMENT MAINTENANCE
- OPERATIONS

► Upstream Technical

- GEOLOGY
- GEOPHYSICS
- PETROLEUM ENGINEERING
- PETROPHYSICS



# Oil & Gas Business | Petroleum Online

Petroleum Online is a comprehensive series of 13 e-Learning courses that provide an in-depth introduction to the commercial and technical aspects of the Oil & Gas Business value chain. From the industry overview through upstream, midstream, and downstream sectors, it is conveniently accessible on any device and makes learning more enjoyable. The series features engaging videos to introduce key concepts, animations that help bring the content to life, along with review questions and challenging assessments to improve learning.

[GO TO IHRDC.COM](https://www.ihrdc.com)

## Audience

These courses are ideal for anyone who wants to expand their knowledge of the oil and gas industry, from entry-level or new employees unfamiliar with energy industry fundamentals to board members seeking a more expansive perspective.

## Case Study

### USING PETROLEUM ONLINE TO TEACH EMPLOYEES INDUSTRY FUNDAMENTALS

As a founding sponsor of Petroleum Online, this financial services company helped to shape course content with other industry organizations. The company provides consulting directly to their global oil and gas client base, and the consultants need to understand their clients' business environment. Petroleum Online is a convenient and cost-effective means for the company's oil and gas practitioners, who have little or no direct industry experience, to gain a better understanding of the value chain from wellhead to burner tip. The company uses Petroleum Online and other resources in an on-boarding training program within the Energy Practice. The use of Petroleum Online has grown substantially within the company because of internal marketing and growing demand for oil and gas training.



INDUSTRY OVERVIEW

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Oil & Gas Industry Overview

UPSTREAM OIL & GAS

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- Upstream Oil & Gas Agreements
- Petroleum Geology & The Exploration Process
- Drilling and Well Completions
- Oilfield Development
- Marketing and Trading of Crude Oil

MIDSTREAM OIL & GAS

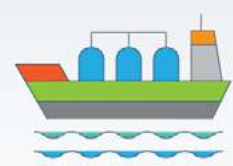
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- Crude Oil Transportation & Storage
- Gas Processing and NGL Markets
- LNG Value Chain and Markets
- Load Balancing including Underground Gas Storage
- Refining & Product Specifications
- Overview of Petrochemicals

DOWNSTREAM OIL & GAS

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Marketing & Distribution of Petroleum Products



# Upstream Petroleum Technology | IPIMS

This industry-leading e-Learning system is designed to build competencies of E&P professionals in Upstream Technology. IPIMS is a solution developed in partnership with industry experts that reflects current instructional design trends. Its learning assets include rigorous and extensive content, award-winning video, and challenging interactions and self-assessment questions to measure progress and achievements. More than 60 leading oil and gas companies now license IPIMS worldwide, which provides two levels of competency-based learning. Through Background Learning, users gain knowledge, skills, and procedural acumen. With Action Learning, they master practical applications through real-life assignments.

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## Audience

This robust series provides both in-depth learning about specific technologies and cross-disciplinary training on broader subjects. Ideal for E&P professionals, technical staff, and students that are interested in deepening their knowledge in upstream petroleum operations.

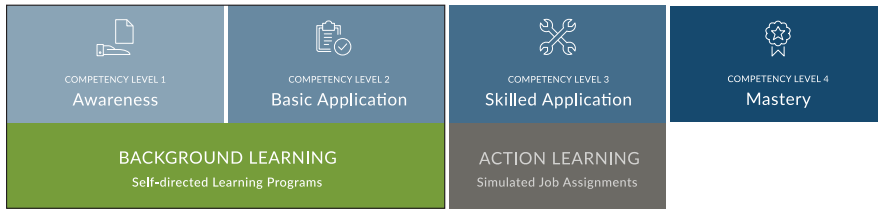
## Case Study

### IMPLEMENTING IPIMS TO INCREASE KNOWLEDGE THROUGHOUT A COMPANY

A major independent integrated oil company with more than 60,000 employees around the world realized they needed an efficient way to increase their E&P workers' knowledge and expertise. The decision to implement IPIMS throughout the organization was based on individual business units' success with the product. The company particularly values the flexibility that IPIMS provides to its training staff, who can tailor programs to their unique development needs. The IPIMS search function is widely used as an on-demand encyclopedia on all upstream technologies. Recently the company began linking IPIMS courses to its Competency Management system to provide employees with an option to replace lecture-based learning with e-Learning. Since its global launch of IPIMS, the company has experienced strong and growing use.







## BACKGROUND LEARNING

### PETROLEUM GEOLOGY

- Introduction and Overview
- Basic Skills of the Petroleum Geologist
- Reservoir Geology
- Sedimentology and Stratigraphy
- Structure, Tectonics and Rock Deformation
- Geochemistry
- Basin and Play Analysis
- Surface Tools and Methods

### PETROLEUM GEOPHYSICS

- Introductory Topics and Seismic Signals
- Seismic Instruments and Field Techniques
- Seismic Processing
- Seismic Interpretation
- 3-D Seismic and Time-Lapse Methods
- Borehole Geophysics and Non-Seismic Methods

### PETROLEUM ENGINEERING

- Petroleum Production Performance
- Production Equipment and Operations
- Drilling Engineering
- Production Facilities Design
- Well Completion and Stimulation
- Reservoir Engineering
- Offshore Operations
- Petroleum Economic Analysis and Fundamentals
- Other Petroleum Engineering Topics



## FORMATION EVALUATION

Well Logging  
Well Testing and Analysis  
Rock and Fluid Sampling and Analysis

## MULTI-DISCIPLINARY

Unconventionals  
Upstream Technology Fundamentals



## ACTION LEARNING

### EXPLORATION

- Basin Analysis
- Dynamics of Deformation
- Surface Geology and Reconnaissance
- Seismic Methods
- Exploration Project Management
- Reservoir Description and Characterization
- Wellsite Geological Operations
- Corporate Exploration Planning and Management

### RESERVOIR MANAGEMENT

- Well Logging and Subsurface Mapping
- Reservoir Engineering Fundamentals
- Reservoir Development Strategies
- Reservoir Characterization and Modeling
- Reservoir Surveillance

### DRILLING AND WELL COMPLETION

- Drilling and Well Completion Practices
- Drilling, Workover and Well Servicing Fundamentals

### PRODUCTION ENGINEERING AND OPERATIONS

- Production and Operating Practices
- Production Fundamentals



## BACKGROUND LEARNING

### Petroleum Geology

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#### ► Introduction and Overview

- Fundamentals of Petroleum Geology
- Subsurface Environment
- Hydrocarbon Properties
- Hydrocarbon Generation and Migration
- Reservoirs
- Hydrocarbon Traps
- Habitat of Hydrocarbons in Sedimentary Basin

#### ► Basic Skills of the Petroleum Geologist

- Geologic Cross-Sections
- Subsurface Mapping
- Prospect Generation

#### ► Reservoir Geology

- Nonmarine Sandstone Reservoirs
- Shelf Marine Sandstone Reservoirs
- Marginal Marine Sandstone Reservoirs
- Deepwater Marine Sandstone Reservoirs
- Porosity Evolution in Sandstone Reservoirs
- Exploration in Carbonate Rocks
- Porosity Evolution in Carbonate Rocks
- Evaporites and their Role in Petroleum Exploration
- Basic Geostatistics

#### ► Sedimentology and Stratigraphy

- Subsurface Facies Analysis
- Classic Sequence Stratigraphy
- Stratigraphic Disciplines and Sequence Stratigraphy
- Micropaleontology for Petroleum Exploration
- Chronostratigraphy and Microfossils
- Chemostratigraphy
- Ongoing Development in Biostratigraphy
- Magnetostratigraphy
- Geochronological Dating Techniques

#### ► Structure, Tectonics and Rock Deformation

- Petroleum Geomechanics
- Structural Geology
- Plate Tectonics and Sedimentary Basins
- Divergent Margins and Rift Basins
- Convergent Margin Basins



▶ **Geochemistry**

Introduction to Petroleum Chemistry  
Applications of Petroleum Geochemistry

▶ **Basin and Play Analysis**

Basin Analysis  
Play Analysis

▶ **Surface Tools and Methods**

Photogeology and Remote Sensing  
Geographical Information Systems

## Petroleum Geophysics

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▶ **Introductory Topics and Seismic Signals**

Fundamentals of Exploration Geophysics  
Signal Theory  
Seismic Pulse  
Waveform to Geologic Model  
Seismic Reflection

▶ **Seismic Instruments and Field Techniques**

Surveying and Mapping on Land  
Introduction to Seismic Acquisition Techniques  
Introduction to Seismic Acquisition Planning  
Positioning and Mapping at Sea  
Multiple Coverage  
Array Design  
Vibroseis  
Choosing the Field Variables  
Quality Control in the Field  
Multicomponent Seismic Applications

▶ **Seismic Processing**

Basic Seismic Processing  
Initial Processes  
Velocities  
Static Corrections  
Deconvolution  
Multiple Attenuation  
Stacking, Filtering and Display  
Seismic Migration  
Synthetic Seismogram Modeling



► **Seismic Interpretation**

- Basic Seismic Interpretation
- Fault Interpretation
- Seismic Contouring
- Velocity Interpretation and Depth Conversion
- Hydrocarbon Indicators
- Seismic Stratigraphic Modeling
- Seismic Interpretation of Shales

► **3-D Seismic and Time-Lapse Methods**

- 3D and 4D Seismic Modeling, Design and Acquisition
- 3D and 4D Seismic Processing, Interpretation and Visualization

► **Borehole Geophysics and Non-Seismic Methods**

- Gravity and Magnetics
- Controlled Source Electromagnetic Methods
- Crosswell Seismology
- Vertical Seismic Profiles
- Other Geophysical Techniques
- Microseismic Studies of Reservoirs

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## Petroleum Engineering

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► **Petroleum Production Performance**

- Fluid Flow and the Production System
- Artificial Lift Methods

► **Production Equipment and Operations**

- Wellheads, Flow Control Equipment and Flowlines
- Fluid Separation and Treatment
- Oilfield Safety
- Cased Hole Logging
- Intelligent Completions
- Overview of Rigless Well Intervention
- Slickline Well Intervention
- Electric Line Well Intervention
- Coiled Tubing Well Intervention

► **Drilling Engineering**

- Well Planning
- Drill String Components
- Drill Bits
- Drilling Fluids and the Circulating System
- Directional and Horizontal Drilling
- Underbalanced Drilling
- Drilling Problems and Drilling Optimization



► **Production Facilities Design**

- Oil Systems and Equipment
- Gas Systems and Equipment
- Water Systems and Equipment
- Utility Systems and Equipment
- Instrumentation
- Platform and Structural Design Considerations

► **Well Completion and Stimulation**

- Basic Completion Design and Practices
- Cementing
- Completion Equipment
- Perforating
- Acidizing and Other Chemical Treatments
- Hydraulic Fracturing
- Sand Control
- Horizontal Wells: Completion and Evaluation

► **Reservoir Engineering**

- Fundamentals of Reservoir Engineering
- Reservoir Environments and Characterization
- Improved Recovery Processes
- Reservoir Simulation
- Resources and Reserves Estimation
- Issues in Reservoir Management

► **Offshore Operations**

- Offshore Production Facilities
- Deepwater Drilling

► **Petroleum Economic Analysis and Fundamentals**

- Energy Project Economics and Risk Analysis
- Risk Analysis Applied to Petroleum Projects

► **Other Petroleum Engineering Topics**

- Natural Gas Fluid Properties
- Oil and Gas Pipelines
- Integrated Reservoir Characterization



## Formation Evaluation

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### ▶ Well Logging

- Overview of Formation Evaluation
- Logging Equipment and Operational Procedures
- Logging Tools and Well Logs
- Specialized Open and Cased Hole Logging Tools and Well Logs
- Specialized Well Log Interpretation
- Well Log Interpretation Essentials
- Low Resistivity and Low Contrast Pay Interpretation
- Dipmeter Surveys
- Borehole Imaging

### ▶ Well Testing and Analysis

- Fundamentals of Well Testing
- Gas Well Testing
- Oil Well Testing
- Drillstem Testing
- Advanced Pressure Transient Analysis

### ▶ Rock and Fluid Sampling and Analysis

- Fluid Sampling and Analysis
- Coring
- Core Analysis
- Sampling and Analysis of Drilled Cuttings
- Mud Logging

## Multi-Disciplinary

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### ▶ Unconventionals

- Introduction to Unconventional Resources

### ▶ Upstream Technology Fundamentals

- Drilling and Completion Fundamentals
- Production Technology Fundamentals
- Reservoir Management Fundamentals
- Geosteering: Fundamentals, Planning, and Implementation





## ACTION LEARNING

### Exploration

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#### ► Basin Analysis

- Sedimentology
- Sequence Stratigraphy
- Seismic Sequence Stratigraphy
- Biostratigraphy
- Petroleum Geochemistry

#### ► Dynamics of Deformation

- Tectonics
- Structural Geology
- Rock Properties and Mechanics

#### ► Surface Geology and Reconnaissance

- Surface Geology
- Remote Sensing
- Geodetic Coordinate Systems
- Magnetostratigraphy, Chemostratigraphy, and Radiometric Dating
- Gravity, Magnetic, and Electromagnetic Exploration Methods

#### ► Seismic Methods

- Seismic Data Acquisition
- Geophysical Instrumentation
- Seismic Survey Design
- Seismic Data Processing
- Wellbore Seismic
- 2-D Seismic Interpretation
- 3-D Seismic Interpretation
- Seismic Attributes and Direct Hydrocarbon Indicators (DHI)

#### ► Exploration Project Management

- Exploration Process
- Project Economics, Risk, and Uncertainty Analysis
- Value of Information
- Exploration Business Management
- Exploration Project Management

#### ► Reservoir Description and Characterization

- Petrophysical Evaluation
- Interpretation of Well Logs
- Reservoir Geology
- Reservoir Geophysics
- Exploration Geostatistics



► **Wellsite Geological Operations**

- Geological Operations and Logistics
- Data Logging and Geological Information
- Exploratory and Delineation Drilling

► **Corporate Exploration Planning and Management**

- Strategic Scenario Planning and Business Analysis
- Exploration Project Best Practices and Procedures
- Corporate Portfolio Management
- Portfolio Performance Optimization
- Environmental Impact Evaluation

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## Reservoir Management

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► **Well Logging and Subsurface Mapping**

- Interdisciplinary Data Acquisition
- Wireline Well Logging
- Well Log Quality Control
- Well Log Interpretation
- Subsurface Mapping
- Reserves Definitions, Reporting, and Mapping

► **Reservoir Engineering Fundamentals**

- Reservoir Rock and Fluid Properties
- Rock Mechanics Fundamentals
- Stability and Rock Deformation Models
- Reservoir Drive Mechanisms
- Multidisciplinary Reservoir Management

► **Reservoir Development Strategies**

- Economic Evaluation
- Permitting for Well Operations
- Health, Safety, and Environment
- Reservoir Management and Control
- Improved Recovery

► **Reservoir Characterization and Modeling**

- Compaction and Subsidence
- Pressure/Production Data Analysis
- Flow Unit Determination
- Reservoir Simulation

► **Reservoir Surveillance**

- Data Acquisition
- Geologic/Seismic Integration
- Geological Model Updating
- Petrophysical Model Updating
- Reservoir Model Updating



## Drilling and Well Completion

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### ▶ Drilling and Well Completion Practices

- Initial Well Planning
- Well Design
- Drilling Program Planning and Implementation
- Drilling Operations
- Well Completion Operations

### ▶ Drilling, Workover and Well Servicing Fundamentals

- Well Planning
- Well Completion Design
- Drilling and Workover Fluids
- Drilling and Workover Hydraulics
- Cementing
- Directional, Horizontal, and Multilateral Wells

## Production Engineering and Operations

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### ▶ Production and Operating Practices

- Flowing Well Performance and Production System Analysis
- Artificial Lift Methods
- Well Stimulation and Sand Control
- Workover Planning and Operations
- Surface Production Operations

### ▶ Production Fundamentals

- Production Methods
- Production Optimization
- Production Facilities
- Well Testing





# Operations & Maintenance

Our O&M e-Learning is a comprehensive resource of more than 372 courses devoted to Fundamentals, Health, Safety, and Environment (HSE), Maintenance, and Operations. Our courses provide oil and gas organizations with the resources to develop and cross-train their operators and maintenance technicians in the essentials, including production, gas process operations, processing and refining, and transportation and distribution. The courses ensure employees understand the relevant theories, plant processes, equipment, and component operations that are necessary to drive efficiencies, promote safety, and achieve operational excellence.

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## Audience

This series is for operators and maintenance technicians in the oil and gas industry from upstream to downstream sectors, including production and process operations, processing and refining, and transportation and distribution.

## Case Study

### TRAINING SOLUTIONS FOR FIELD WORKERS, NEW OR EXPERIENCED

A major international oil and gas company was searching for a way to train their O&M workers to ensure it had a competent, well-trained workforce across all levels of the organization. The company has E&P operations around the world, including shale and oil sands. It required several elements for its training resources: SCORM-compliant courses, coverage of the entire oil and gas value chain, and that the courses were useful for all of its field workers, from new hires to senior employees. The company selected IHRDC's O&M e-Learning for approximately 10,000 workers, to provide consistent instruction, and therefore knowledge, across the entire company and different business units. The continuity of training has helped all of the company's employees become more effective.





## FUNDAMENTALS

### MATH & SCIENCE

- Chemistry
- Math
- Physics

### O&M FUNDAMENTALS

- Operations Fundamentals
- Drawings and Diagrams
- Electrical
- Power and Steam Systems
- Process Control
- Tools

## HSE

### ENVIRONMENT

- Environmental Protection
- Hazardous Waste Operations
- Refinery Operations
- Water Treatment

### HEALTH

- Chemical Safety
- Health

### QUALITY

- Quality Schemes

### SAFETY

- Introduction to Safety
- Electrical Safety
- Fire Protection
- Forklift Safety
- Laboratory Safety
- Materials Handling and Storage
- Personal Protection Equipment
- Workplace Safety



## MAINTENANCE

### MECHANICAL

- Boilers
- Compressors
- Gears, Equipment Drive Components and Shaft Alignment
- Hydraulic Systems
- Lubrication and Bearings
- Pipes, Piping and Auxiliaries
- Pumps and Seals
- Valves
- Other Mechanical Activities

### ELECTRICAL

- Circuits
- Electrical Components
- Electrical Generation and Storage
- Electrical Theory
- Electrical Wiring
- Motors
- Transformers, Breakers and Switches

### INSTRUMENTATION & CONTROL

- Actuator, Valve, and Motor Controllers
- Distributed Control Systems
- Field Device Configuration
- Human-Machine Interface and Plant Protection Systems
- Measurement Devices
- Networks
- Process Control
- Programmable Logic Controllers
- Variable Speed Drives



## OPERATIONS

### FUNCTION-SPECIFIC PROCESS OPERATIONS

- Power Plant Operation
- Refining Process Technologies
- Laboratory Operations
- Analytical Chemistry Operations

### GAS TREATMENT AND PROCESSING

- Gas Operations Fundamentals
- Introduction to Gas Processing
- Condensate Separation
- Gas Compression
- Gas Treatment (removal of CO<sub>2</sub> & H<sub>2</sub>S)
- Gas Dehydration
- Gas Processing (separation of NGLs)
- Gas and NGL Sampling, Metering and Transfer

### OIL & GAS PROCESS OPERATIONS

- Basic and Heavy Lifting
- Boilers
- Distillation
- Furnaces
- Heat Exchangers
- Pumps
- Refrigeration System
- Storage Tank Operations
- Turbines and Steam Systems
- Other Systems and Equipment

### OIL PRODUCTION OPERATIONS

- Production Systems
- Surface Production Facilities



## Fundamentals

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### Math & Science

#### ► Chemistry

- Basic Principles of Chemistry 1
- Basic Principles of Chemistry 2
- Gases and Flowing Liquids
- Heat
- Heat Transfer
- Material Balancing
- Reaction Rates
- Solids and Liquids
- Inorganic Chemistry
- Aliphatic Chemistry
- Aromatic Chemistry

#### ► Math

- Basics of Math
- Basic Mathematical Operations 1
- Basic Mathematical Operations 2
- Algebra
- Binary, Octal, Hexadecimal Numbers
- Boolean Algebra, Part 1
- Boolean Algebra, Part 2
- Boolean Algebra, Part 3
- Formulas, Graphs, and Trends
- Unit Conversion and Scientific Notation
- Calculations in Chemical Solutions
- Statistical Analysis for Laboratory Technicians

#### ► Physics

- Basic Principles of Physics
- Forces and Machines
- Power and Energy
- Fluid Systems





## O&M Fundamentals

### ► Operations Fundamentals

- Basic Operator Responsibilities
- Advanced Operator Responsibilities
- Basic Refinery Operations
- Refining Basics
- Preparation in Process Operations
- Basic Troubleshooting in Process Operations
- Communication in Process Operations
- Implementation and Evaluation of Equipment
- Introduction to Operator Responsibilities
- Obtaining Samples
- Plant Production and Safety
- Process Examples
- Testing Samples
- Trends, Maintenance, and Emergencies

### ► Drawing and Diagrams

- Basic Diagrams and Symbols 1
- Basic Diagrams and Symbols 2
- Blueprints
- Electrical Diagrams
- Flow and Electrical Diagrams
- Industrial Process Systems
- Piping and Instrumentation Diagrams

### ► Electrical

- AC Circuits
- Basic Electrical Circuits
- Basic Electrical Principles
- Basic Electrical Test Equipment
- Basic Electricity Review
- Sources of Electricity
- Voltage and Current Principles

### ► Power and Steam System

- Power Generation and Hydrogen Cooling
- The Steam Cycle

### ► Process Control

- Basic Control Charts
- Introduction to Process Control
- Introduction to Statistical Process Control
- Process Dynamics and Measurement
- Process Variations



## ▶ Tools

- Introduction to Hand Tools
- Introduction to Power Tools
- Precision Measurement Instruments

## HSE

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## Environment

### ▶ Environmental Protection

- Air Pollution
- Pollution Control in Plants
- Water Pollution and Waste Disposal

### ▶ Hazardous Waste Operations

- Introduction to Hazardous Waste Operations
- Hazard Communication
- Hazardous Waste First Responder - Awareness

### ▶ Refinery Operations

- Emission Controls

### ▶ Water Treatment

- Wastewater 1
- Wastewater 2
- Water for Plant Systems 1
- Water for Plant Systems 2

## Health

### ▶ Chemical Safety

- Chemical Health Hazards
- Safety Data Sheets - SDS
- Globally Harmonized System Overview

### ▶ Health

- Bloodborne Pathogens
- Hearing Conservation
- Workplace Ergonomics

## Quality

### ▶ Quality Schemes

- ISO 9000



## Safety

### ▶ Introduction to Safety

- Safety Basics
- Safety Fundamentals in Power Plants
- Safety Orientation

### ▶ Electrical Safety

- Introduction to Electrical Safety
- Advanced Electrical Safety
- Electrostatic Discharge Precautions

### ▶ Fire Protection

- Classes of Fires and Extinguishers
- Fire Safety

### ▶ Forklift Safety

- Forklift Safety Checks
- Safe Forklift Operation
- Understanding Forklifts

### ▶ Laboratory Safety

- Introduction to Laboratory Safety
- The Safe Lab Environment
- Personal Safety for Lab Technicians

### ▶ Materials Handling and Storage

- Tank Trucks
- Transporting Hazardous Materials
- Warning Signs and Labels

### ▶ Personal Protection Equipment

- Personal Protection Equipment
- Respirator Fit Testing
- Respiratory Protection

### ▶ Workplace Safety

- Back Safety
- Confined Space Entry
- Driving Safety
- Fall Protection
- Ladders and Scaffolds
- Blinding
- Safety Relief Valves and Rupture Discs
- Lockout/Tagout



## Maintenance

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### Mechanical

#### ▶ Boilers

- Boilers - Basic Principles and Types
- Boilers - Combustion, Water, and Steam

#### ▶ Compressors

- Introduction to Compressors
- Centrifugal Compressors
- Operation of Centrifugal and Axial Compressors
- Positive Displacement Compressors
- Reciprocating Compressors
- Types of Compressors - Centrifugal and Axial

#### ▶ Gears, Equipment Drive Components and Shaft Alignment

- Drive Components, Couplings, and Clutches
- Drive Component Operations
- Gear, Belt, and Chain Drives
- Gears - Overhauls
- Gears - Types and Characteristics
- Shaft Alignment - Fundamentals
- Shaft Alignment - Reverse Dial and Laser
- Shaft Alignment - Rim and Face

#### ▶ Hydraulic Systems

- Hydraulic Actuators
- Hydraulic Component Inspection and Replacement
- Hydraulic Diagrams
- Hydraulic Fluid and Reservoirs
- Hydraulic Principles and Circuits
- Hydraulic Pumps
- Hydraulic Valves 1
- Hydraulic Valves 2
- Routine Maintenance of Hydraulic Systems
- Troubleshooting of Hydraulic Systems

#### ▶ Lubrication and Bearings

- Bearings - Fundamentals
- Bearings - Rolling Contact
- Bearings - Sliding Surface
- Lubricants and Bearings
- Lubrication - Basics
- Lubrication - Using Lubricants



## ▶ Pipes, Piping and Auxiliaries

- Pipes and Pipe Fittings
- Piping - Basic Components and Functions
- Piping - System Components and Operation
- Special Calculations in Pipes
- Flange Installation

## ▶ Pumps and Seals

- Centrifugal Pump Basics and Troubleshooting
- Centrifugal Pump Overhaul
- Multistage Centrifugal Pumps
- Positive Displacement Pumps
- Seals - Gaskets and Packing
- Seals - Mechanical

## ▶ Valves

- Basic Types and Operation of Valves 1
- Basic Types and Operation of Valves 2
- Safety Valves, Part 1
- Safety Valves, Part 2
- Valve Maintenance
- Valve Types and Operation

## ▶ Other Mechanical Activities

- Arc Welding
- Operations of Forklifts
- Oxy-Fuel Gas Welding

## Electrical

### ▶ Circuits

- Filter Circuits
- J-K Flip-Flops
- Parallel Circuits
- Series Circuits
- Series-Parallel Circuits
- Transistor Oscillators
- Troubleshooting Electrical Circuits
- Troubleshooting Operational Amplifier Circuits
- Use of Ohm's and Kirchhoff's Laws in DC Circuits

### ▶ Electrical Components

- Capacitors, Part 1
- Specialized Electronic Devices
- Capacitors, Part 2
- Inductors, Part 1
- Inductors, Part 2
- Operational Amplifiers, Part 1



Operational Amplifiers, Part 2  
SCRs and TRIACs  
Specialized Electronic Devices  
Transistor Configurations

## ▶ Electrical Generation and Storage

AC Generator Maintenance  
Battery Systems  
Electrical Production and Distribution  
Power Supplies

## ▶ Electrical Theory

Kirchhoff's Law  
Magnets and Magnetic Fields  
Ohm's Law

## ▶ Electrical Wiring

Cables and Conductors  
Conduit Installation  
Fasteners  
Grounding  
Introduction to the NEC  
Splices and Terminations

## ▶ Motors

AC and DC Motors  
DC Motors  
Motor Branch Circuit Protection  
Three Phase Motors

## ▶ Transformers, Breakers and Switches

Introduction to Transformers, Breakers, and Switches  
Electromagnetic Relays  
Fuses  
Ground Fault Interrupters  
High-Voltage Breakers and Switchgear  
Maintenance of Low-Voltage Circuit Breakers  
Relays 1  
Relays 2  
Transformers

## Instrumentation & Control

### ▶ Actuator, Valve, and Motor Controllers

Introduction to Actuators  
Electric and Hydraulic Actuators  
Basic Functions of AC Motor Controllers



- Motor Controllers and Operation
- Motor Operators
- Pneumatic Control
- Principles of Controllers
- Smart Controllers
- Troubleshooting of AC Motor Controllers

## ▶ Distributed Control Systems

- Introduction to Distributed Control Systems
- Troubleshooting DCS I/Os: Practices
- Troubleshooting DCS I/Os: Procedures

## ▶ Field Device Configuration

- Field Devices: Analog Configuration
- Field Devices: Configuring with a Laptop PC
- Field Devices: Digital Configuration with a DCS

## ▶ Human-Machine Interface and Plant Protection Systems

- The Human-Machine Interface
- Human-Machine Interface and Troubleshooting
- Plant Protection Equipment and Integrated Systems

## ▶ Measurement Devices

- Digital and Analog Oscilloscopes
- Field Devices: Analyzers
- Field Devices: Level and Flow
- Field Devices: Pressure, Temperature, and Weight
- Field Devices: Using Field Communicators
- Introduction to Vibration Analysis
- Measurement of Concentration
- Measurement of Density, Clarity, and Moisture
- Measurement of Level and Flow
- Measurement of Pressure and Temperature
- Principles of Calibration

## ▶ Networks

- Fiber Optic Systems
- Introduction to Control and Data Systems
- Introduction to Networks
- Setting Up and Troubleshooting Networks



## ▶ Process Control

- Automatic Process Control 1
- Automatic Process Control 2
- Multiple Loop Control
- Principles of Process Control
- Single Loop Control
- Troubleshooting Loops
- Tuning Loops

## ▶ Programmable Logic Controllers

- Architecture, Types, and Networks of PLCs
- I/O Communication
- Installing and Maintaining PLCs
- Introduction to Digital Logic
- Introduction to Programming
- Ladder Logic and Symbology
- Program Entry, Testing, and Modification
- Programming Common Functions
- Troubleshooting Hardware
- Troubleshooting Software and Networks

## ▶ Variable Speed Drives

- Applications of VSDs
- Introduction to VSDs
- Programming Controllers
- System Troubleshooting of VSDs
- Systems and Integration of VSDs
- Troubleshooting VSD Controllers

## Operations

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## Function-Specific Process Operations

### ▶ Power Plant Operations

- Basic Principles of Power Plant Operations

### ▶ Refining Process Technologies

- Alkylation Operations
- Azeotropic, Extractive, and Vacuum Columns
- Blending Operations
- Crude Distillation Operations
- Fluid Catalytic Cracking Operations





- Hydrotreating and Catalytic Reforming 1
- Hydrotreating and Catalytic Reforming 2
- Process Reactor Fundamentals
- Treating and Sulfur Recovery Operations
- Typical Process Reactions, Part 1
- Typical Process Reactions, Part 2

## ► Laboratory Operations

- Basic Lab Operations
- Laboratory Glassware
- Laboratory Hardware
- Laboratory Robotics
- QA/QC in the Laboratory
- Sample Preparation
- Separation and Isolation of Materials
- Weighing and Measuring Techniques

## ► Analytical Chemistry Operations

- Analytical Procedures
- Atomic Absorption
- Gas Chromatography
- High Pressure Liquid Chromatography
- Infra-Red Analysis
- Ion Concentration Analysis
- Mass Spectrometry
- Nuclear Magnetic Resonance
- Optical Analysis
- UV Visible Spectroscopy

## Gas Treatment and Processing

### ► Gas Operations Fundamentals

- Basic Principles of Pressure and Temperature
- Heat Exchanger Principles
- Gas Processing Utilities and Systems (task focused)
- Inlets System (task focused)
- Liquids Product Storage (task focused)

### ► Introduction to Gas Processing

- Principles of Gas Processing
- Gas Processing Systems (task focused)
- Gas Recovery Systems (task focused)
- Refrigeration Systems (task focused)



## ▶ Condensate Separation

- Production Separator Principles
- Condensate Stabilization (task focused)

## ▶ Gas Compression

- Reciprocating Compressor Principles
- Reciprocating Compressor Operation
- Centrifugal Compressor Principles
- Compression Overview (task focused)
- Feed Gas Chilling (task focused)

## ▶ Gas Treatment (removal of CO<sub>2</sub> & H<sub>2</sub>S)

- Amine System Overview (task focused)
- Principles of Amine Sweetening
- Amine Sweetening Unit Operation

## ▶ Gas Dehydration

- Principles of Glycol Dehydration
- Glycol Dehydration Unit Operation
- Glycol Dehydration Systems Overview (task focused)
- Glycol Regeneration System Overview (task focused)

## ▶ Gas Processing (separation of NGLs)

- Cryogenic Process Principles
- Deethanization (task focused)

## ▶ Gas and NGL Sampling, Metering and Transfer

- Orifice Meter Station Fundamentals
- Orifice Meter Station Operations/Maintenance
- NGL Measurement I: Gas Liquids and Metering
- NGL Measurement II: Methods for Measurement
- Natural Gas and NGL Sampling
- Electronic Flow Measurement
- Gas Metering and Custody Transfer (task focused)

## Oil & Gas Process Operations

### ▶ Basic and Heavy Lifting

- Basic Lifting
- Heavy Lifting
- Overview of Rigging

### ▶ Boilers

- Abnormal Conditions and Emergencies
- Combustion and Boiler Operation
- Condensate and Feedwater Systems
- Condenser and Circulating Water



Normal Operations of Boilers  
Startup and Shutdown of Boilers  
Water and Steam

## ▶ Distillation

Basic Distillation System Components and Operation  
Basic Principles of Distillation  
Distillation Control Systems  
Distillation Operating Problems  
Distillation System Startup and Shutdown  
Towers, Reboilers, and Condensers

## ▶ Furnaces

Introduction to Furnaces  
Furnace Operating Conditions  
Furnace Startup and Shutdown

## ▶ Heat Exchangers

Introduction to Heat Exchangers  
Condensers and Reboilers  
Cooling Towers  
Operation of Shell- and Tube-Type Heat Exchangers

## ▶ Pumps

Basic Pump Types and Operation  
Fundamentals of Centrifugal Pumps  
Operation of Centrifugal Pumps  
Performance and Inspection of Pumps  
Reciprocating Positive Displacement Pumps  
Rotary Positive Displacement Pumps

## ▶ Refrigeration System

Basic Concepts of Refrigeration Systems  
Operations of Refrigeration Systems  
Refrigeration Systems, Part 1  
Refrigeration Systems, Part 2

## ▶ Storage Tank Operations

Above Ground Storage Tanks, Part 1  
Above Ground Storage Tanks, Part 2  
Above Ground Storage Tanks, Part 3

## ▶ Turbines and Steam Systems

Bearings and Operation  
Boiler and Turbine Protection  
Steam Flow and Steam Turbines  
Steam Systems  
Steam Traps



## ▶ Other Systems and Equipment

- Auxiliary Vessels
- Fans
- Filtration and Screening Unit Operations
- Flaring, Venting, and Purging
- Fundamentals of Process Solubility
- Material Handling of Bulk Liquids
- Portable and Emergency Equipment

## Oil Production Operations

### ▶ Production Systems

- Beam Pumping Unit Principles
- Sucker Rod Pumping Principles

### ▶ Surface Production Facilities

- Emulsions and Vertical Heater Treater Principles
- LACT Unit Principles
- LACT Unit Operations
- Lease Tank Gauging and Testing
- Emulsions and Horizontal Heater Treater Principles
- Vapor Recovery Unit Principles



# Business Essentials

These innovative, self-paced courses, in 22 key business areas, are designed to improve the critical business skills of individuals at all levels of the organization. They do so in a practical way by including engaging, real-world examples, readings, and case studies. We have partnered with a leading Boston-based e-Learning developer of business topics for major corporations and top business schools. These courses may be pursued individually, organized collectively into a curriculum, or incorporated into a learning management system to supplement basic business knowledge.

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## Audience

Business Essentials is ideal for anyone who needs to improve their understanding and knowledge of business processes and proficiencies within the context of the energy industry.

## Case Study

### DEVELOPING PROJECT MANAGEMENT AND COMMUNICATION SKILLS WITH BUSINESS ESSENTIALS

A national joint-venture LNG company was in the initial stages of construction and manpower development for a substantial new project. As they progressed, upper management recognized the need to implement more formal project management awareness and develop critical communication skills for their employees. After investigating several options, the company determined that IHRDC's Business Essentials, specifically the Project Management and Communications courses, provided an economic and easy-to-execute solution.



## BUSINESS

- Business Management
- Data Analytics
- Entrepreneurship
- HR Management
- International Trade
- Logistics and Supply Chain Operations
- Marketing
- Six Sigma/Lean
- HR Ethics
- Change Management
- Frontline Manager
- HR Skills
- Women in Business

## FINANCE AND ACCOUNTING

- Finance and Accounting

## IT AND INSTRUCTIONAL DESIGN

- Computer Applications
- IT/Cybersecurity
- Online Learning

## PERSONAL DEVELOPMENT

- Career Building
- Communications
- Creativity and Innovation
- Leadership
- Remote Work

## PROJECT MANAGEMENT

- Agile
- Project Management Skills



## Business

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### ► Business Management

- Emotional Intelligence for Managers
- Negotiations: Resolving Disputes
- Introduction to Business Analysis
- Accounting Fundamentals for Small Businesses
- Introduction to Small Business Management
- Handling Difficult Conversations in the Workplace
- Small Business Marketing
- Budgeting and Financial Analysis for Small Businesses
- Fundraising for Nonprofit Organizations
- Law for Small Businesses
- Project Management for Small Businesses
- Leading and Managing Small Businesses
- How Can I Help You? Customer Service Best Practices
- Banking Today
- Legal Foundations in Banking
- Quality Service
- Financial Math Basics
- Introduction to Probability and Statistics
- HR Fundamentals for Managers
- Introduction to Management
- Managing Remote Employees
- Business Ethics in the 21st Century
- Handling Difficult Employee Behavior
- Managing in a Modern Organization
- Negotiations: Making Business Deals
- Handling Workplace Conflict
- A Manager's Guide to Superior Customer Service
- Quality Management Basics
- The Effective Manager's Toolbox
- Managing People
- Time Management
- How to Coach

### ► Data Analytics

- Introduction to Data Analysis
- Statistics as a Managerial Tool
- Tools of Data Analysis
- Statistical Process Control
- Data Analysis in the Real World
- Data Analysis for Improving Organizational Performance



## ► Entrepreneurship

- Business Law for Entrepreneurs
- Introduction to Entrepreneurship
- Leadership and Management for Entrepreneurs
- Strategic Marketing for Entrepreneurs

## ► HR Management

- HR Fundamentals for Small Businesses
- HR Hot Topic: Marijuana and the Workplace
- HR Hot Topic: Diversity and Inclusion in the Workplace
- HR Hot Topic: Pay Equity
- HR Hot Topic: Promoting Employee Well-being
- HR Hot Topic: Handling Workplace Violence
- HR Hot Topic: Buzzworthy Benefits
- HR Hot Topic: Employee Classification
- All Together Now: The Multigenerational Workforce
- HR Simulation: BioSage Labs
- aPHRi® Exam Prep Course
- Aspects of an Inclusive Culture
- Inclusive HR Leadership
- Thriving in the HR Executive Role
- Inclusive Engagement and Development
- Legal Compliance and Ethical Responsibility
- Use of Analytics
- Talent Management Systems
- Tools for Strategic Alignment
- Assessing Workforce Needs
- Recruitment Analytics
- Analytics That Support the Workforce
- PHR Exam Prep Course (2024)
- SPHR Exam Prep Course (2024)
- Artificial Intelligence for HR Professionals
- HR Essentials for People Managers
- Compensation and Benefits
- Assessing Diversity and Inclusion
- Building and Supporting a Remote Workforce
- Cybersecurity for Human Resources Professionals
- Fostering an Inclusive Culture
- Hiring and Retaining Diverse Talent
- HR Hot Topic: Flexible Work Arrangements
- HR Hot Topic: Recruiting Multi-generational Employees
- HR Hot Topic: The Future of Work
- HR in Times of Crisis
- The Hybrid Workplace
- The Modern Office
- Introduction to Human Resource Management
- Employee Safety
- Data and Human Resource Management
- Employee Rights





- Employee Selection
- Performance Management
- Talent Management and Career Development
- Equal Employment Opportunity
- Developing Healthy Workplaces
- Dimensions of Employee Wellness
- Management Practices That Support Wellness

## ▶ International Trade

- Global Business Management
- Global Marketing
- Global Supply Chain Management
- Global Trade Finance

## ▶ Logistics and Supply Chain Operations

- Supply Chain Management Basics
- Logistics and Distribution Management
- Operations Management
- Procurement and Supply Management

## ▶ Marketing

- PCM® Marketing Management Bundle
- Google Analytics 4
- Artificial Intelligence for Marketing Professionals
- Search Engine Optimization
- Content Marketing
- Conversion Rate Optimization
- Paid Search (PPC)
- Web Analytics
- Mobile Marketing
- An Overview of Marketing
- Social Media Marketing
- Marketing Automation
- Digital Marketing Strategy

## ▶ Six Sigma/Lean

- Recertification Exam - Six Sigma Green Belt
- Recertification Exam - Six Sigma Yellow Belt
- Lean Six Sigma Basics
- Lean Six Sigma Yellow Belt Certification Exam
- Lean Basics
- Six Sigma Green Belt Certification Exam
- Six Sigma Yellow Belt Certification Exam
- Lean Six Sigma Green Belt Certification Exam
- Six Sigma Basics



## ► HR Ethics

- HR Ethics Series: Building an Ethical Organization
- HR Ethics Series: Capitalism, Inequality, and Justice
- HR Ethics Series: Common Ethical Challenges
- HR Ethics Series: Corporations and Corporate Social Responsibility
- HR Ethics Series: Defining Business Ethics
- HR Ethics Series: Ethical Decision Making
- HR Ethics Series: Globalization and Ethics
- HR Ethics Series: Issues in the Workplace
- HR Ethics Series: Leadership and Organizational Ethics
- HR Ethics Series: Theories of Ethics

## ► Change Management

- Change Management Professional
- Change Management Foundations
- Under Pressure: A Change Management Simulation

## ► Frontline Manager

- Frontline Manager®: Introduction to Supervision
- Frontline Manager®: Coaching
- Frontline Manager®: Progressive Discipline
- Frontline Manager®: Time Management
- Frontline Manager®: Work-Life Balance
- Frontline Manager®: Better Communication
- Frontline Manager®: Leadership Styles
- Frontline Manager®: Teams and Groups
- Frontline Manager® Simulation: Leading a Team at Dragonfly
- Frontline Manager®: Navigating Your Organizational Culture

## ► HR Skills

- HR Skills®: SMART Goals for Performance Evaluation
- HR Skills®: Communication and HR
- HR Skills®: Coaching
- HR Skills®: Handling Difficult Conversations
- HR Skills®: Progressive Discipline
- HR Skills®: Leadership and HR
- HR Skills®: Conflict Resolution
- HR Skills®: The Hiring Process
- HR Skills®: Problem-Solving
- HR Skills®: Exit Interviews
- HR Skills®: Onboarding
- HR Skills®: Training and Development
- HR Skills®: Interviewing
- HR Skills®: Effective Meetings
- HR Skills®: Interpreting Data



## ► Women in Business

- Body Language for Women in Business
- Issues Facing Women in Business
- Leadership and Management for Women in Business
- Communication for Women in Business
- Work-Life Balance for Women in Business
- Networking and Mentorship for Women in Business
- Negotiation for Women in Business

## Finance and Accounting

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## ► Finance and Accounting

- Time Value of Money and Risk
- Introduction to Finance
- Understanding and Managing Budgets
- Introduction to Business Statistics
- Accounting and Finance for Entrepreneurs
- How To Read A Financial Statement
- Financial Planning and Control

## IT and Instructional Design

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## ► Computer Applications

- Excel Basics
- Excel Advanced Skills
- Excel Tips & Tricks
- Google Drive Basics
- Microsoft Project Basics
- Microsoft Project Intermediate
- Microsoft Word Basics
- PowerPoint Basics
- PowerPoint for Business
- Visual PowerPoint

## ► IT/Cybersecurity

- Communication and Network Security
- Asset Security
- Identity and Access Management
- Security and Risk Management
- Security Assessment and Testing
- Security Operations



- Software Development Security
- Introduction to Cybersecurity Concepts and Practices
- Introduction to IT Governance, Risk, and Compliance
- Fundamentals of Application Security
- CompTIA Security+® SY0-601 Exam Prep Course
- CISSP Practice Exams and Exam Strategies (2022)
- Security Architecture and Engineering
- A Manager's Guide to Cloud Computing and Cybersecurity
- Application Development for Cloud Computing
- Network Security Scenarios
- Cryptography Scenarios
- CISSP® Exam Prep Course
- Threats and Vulnerabilities Scenarios
- Cloud Data Security
- Cloud Infrastructure & Platform Security
- Cloud Operations Security
- Introduction to Malware
- A Manager's Guide to Information Technology
- Compliance and Operational Security Scenarios
- Application, Data, and Host Security Scenarios
- Access Control and Identity Management Scenarios
- Security Awareness Training

## ► Online Learning

- Online Learning Accessibility
- Introduction to Online Learning
- Narrative Learning
- Teaching Online
- The Technology of Online Learning

## Personal Development

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## ► Career Building

- Personal Branding
- Networking for Success
- Ace Your Job Search!
- Finding Purpose in your Career
- The First 30 Days
- Personal Finance

## ► Communications

- Effective Public Speaking
- Communicating Collaboratively
- Effective Emails, Memos, and Letters
- Speak With Confidence



- Effective Presentations
- Effective Business Writing
- Better Proofreading and Copyediting
- Introduction to Technical Writing
- Troubleshooting Your Writing
- Writing Better Emails
- Introduction to Negotiations

## ► Creativity and Innovation

- Creativity in Teams and Organizations
- Innovation in Teams and Organizations
- Introduction to Critical Thinking
- Personal Creativity

## ► Leadership

- LEED® Green Associate v4™ Exam Prep
- Leadership Assessment
- Introduction to Leadership
- Body Language for Leaders
- Leaders and Work-Life Balance
- Leading and Managing Change
- Leading Teams

## ► Remote Work

- Work From Home: Health and Wellness at Home
- Work From Home: Technology at Home
- Work From Home: Work-Life Balance

## Project Management

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## ► Agile

- Introduction to Agile
- Integrating Agile Into a Waterfall Environment
- Challenges for Agile Teams
- Agile Improvement Simulation: SaaSy Corporation
- Agile Team Simulation: Carnon Corporation
- Agile Certified Practitioner (PMI-ACP)® Exam Prep
- Agile Certified Practitioner (PMI-ACP)® Practice Exams & Exam Strategies

## ► Project Management Skills

- HealthMax Software Project Management Simulation
- Project Management Foundations
- Allerton Connector Highway Project Management Simulation
- Principles of Scrum



- Project Management Team Leadership
- PM Primer- Conflict Resolution
- PM Primer- Cognitive Ability and Decisiveness
- Managing Real World Projects
- 4CShare Global Project Management Simulation
- Ethics for Project Managers
- Emotional Intelligence for Project Managers
- Effectively Managing Project Stakeholders

## ► PM Skills Series

- PM Skills® Toolkit: Communication Tools
- PM Skills® Toolkit: Resource Negotiation Tools
- PM Skills® Simulation: Cuff-It Clothing
- PM Skills®: Interpersonal Skills for Project Leaders
- PM Skills®: Communication
- PM Skills®: Conflict Management
- PM Skills®: Negotiation
- PM Skills®: Critical Thinking and Decision Making
- PM Skills®: Leadership
- PM Skills®: Team Development
- PM Skills®: Interaction and Engagement
- PM Skills®: Change Management
- PM Skills®: Analysis and Problem Solving
- PM Skills®: Embracing Risk and Uncertainty
- PM Skills®: Tailoring and Adaptability
- PM Skills®: Planning and Project Design
- PM Skills®: Expanding Focus and Alignment



# Clean Energy & Sustainability

Our Clean Energy & Sustainability e-Learning solutions are designed to equip professionals in the energy sector with the knowledge and skills necessary to navigate the transition to a low-carbon future. These solutions are particularly valuable for organizations aiming to meet net-zero carbon emissions targets by 2050. Designed to accommodate the diverse needs of professionals, these e-Learning solutions offer flexibility in terms of learning pace and schedule, making them suitable for both individuals and organizations. Enhance your workforce's competency in clean energy and sustainability today to stay ahead of the industry changes of tomorrow.

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## Audience

These courses are ideal for professionals and organizations across the energy sector who are navigating or leading the transition to low-carbon operations. Whether you are part of an integrated energy company, a renewable energy startup, or a regulatory body, CES provides the knowledge and practical insight needed to embed sustainable thinking into business practices, technology adoption, and operational strategy.

## Case Study

### ADVANCING SUSTAINABILITY THROUGH E-LEARNING

A leading integrated energy company, with its main focus on downstream activities, introduced a broad suite of e-Learning courses, including important sustainability focused topics. These complemented their traditional learning and development offerings and helped contribute to the continued and growing awareness of sustainable business practices.



ENERGY TRANSITION

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Overview of the Energy Transition

HYDROGEN

[GO TO IHRDC.COM](#)

Overview of Hydrogen

Hydrogen Production Technologies

Hydrogen Systems Infrastructure and Safety

Hydrogen in Power Generation

Industrial Applications of Hydrogen

Hydrogen Project Economics and Regulatory Issues

GEOTHERMAL ENERGY

CARBON CAPTURE, UTILIZATION AND STORAGE (CCUS)

SOLAR ENERGY

WIND ENERGY

BIOENERGY/BIOFUELS

ENERGY STORAGE SYSTEMS

WATER TREATMENT SYSTEMS

CURRENTLY  
AVAILABLE

COURSE  
DEVELOPMENT  
FRAMEWORK



# Athena Microlearning

Delivering short, 5- to 8-minute learning sessions with rich nuggets of content, Athena Microlearning offers on-demand access and a responsive design on any device. It drives job performance and enables your employees to learn, retain, and apply knowledge.

In today's fast-paced, multitasking world, we all want to gather the information we need as quickly as possible. To successfully reach today's employees, a company's learning strategy must offer targeted right-sized nuggets of information when and where your employees need and want it.

With IHRDC's Athena Microlearning, you can strengthen your training program and enhance learner retention and engagement. With brief learning that is accessible at any time from any device, it's easy to use, drives job performance, and enables your workforce to retain more knowledge. Our Athena Microlearning is well suited for anyone who needs just-in-time access to learning snippets covering Upstream Technology, the Oil & Gas Business value chain, and Operations & Maintenance that includes HSE.

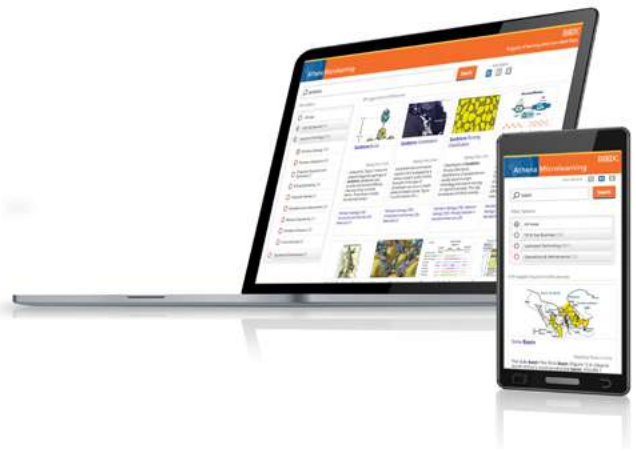
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## Tap into our expansive microlearning content

We currently offer more than 6,500 nuggets of learning that continue to grow and evolve with your needs. Each unit requires no more than 5-8 minutes to complete and features engaging content and graphics, and knowledge checks with constructive feedback.

## Delivering the quality content you expect from IHRDC

Our Athena Microlearning offers the next-generation learning you require. We have adapted the content to bring you everything you need from our suite of popular e-Learning resources.



# Learning Pathways

IHRDC's Pathways enable learners to progress in their training from foundational industry knowledge to generalized functional training, and finally to industry segment-specific learning. By following these plans, learners can achieve the required level of competency to better perform their jobs.

As the premier organization in Competency Management in the Energy Industry, IHRDC has experience bringing custom-developed Competency-based programs to companies around the world, exceeding our client's expectations with top-quality service delivery and professional results.

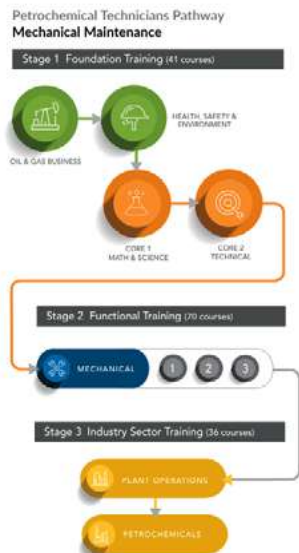
Pathways applies this same methodology by providing custom programs for specific job roles in the Oil & Gas sector. By aligning learning plans to job roles, this means employees learn only what they need to prepare them to perform their job, no more, no less.

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IHRDC's Pathways enable learners to progress in their training from foundational industry knowledge, to generalized functional training, and finally to industry segment-specific learning. By following these plans, learners can achieve the required level of competency to better perform their jobs.

- > By Discipline
- > By Career Stage
- > By Delivery Format



## By Discipline

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### ► Operations & Maintenance

#### MECHANICAL MAINTENANCE

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Oil & Gas Technicians Pathway | Mechanical Maintenance  
Petrochemical Technicians Pathway | Mechanical Maintenance  
Refinery Technicians Pathway | Mechanical Maintenance

#### ELECTRICAL MAINTENANCE

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Oil & Gas Technicians Pathway | Electrical Maintenance  
Petrochemical Technicians Pathway | Electrical Maintenance  
Refinery Technicians Pathway | Electrical Maintenance

#### INSTRUMENT MAINTENANCE

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Oil & Gas Technicians Pathway | Instrument Maintenance  
Petrochemical Technicians Pathway | Instrument Maintenance  
Refinery Technicians Pathway | Instrument Maintenance

#### OPERATIONS

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Oil & Gas Technicians Pathway | Operations  
Petrochemical Technicians Pathway | Operations  
Refinery Technicians Pathway | Operations

## ► Upstream Technical

### GEOLOGY

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Upstream Technical Professionals Pathway | Development Geology  
Upstream Technical Professionals Pathway | Exploration Geology  
Upstream Technical Professionals Pathway | Upstream Management Geology  
Upstream Technical Professionals Pathway | Wellsite Geology

### GEOPHYSICS

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Upstream Technical Professionals Pathway | Seismic Acquisition  
Upstream Technical Professionals Pathway | Seismic Interpretation  
Upstream Technical Professionals Pathway | Seismic Processing  
Upstream Technical Professionals Pathway | Upstream Management Geophysics

### PETROLEUM ENGINEERING

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Upstream Technical Professionals Pathway | Production Engineering  
Upstream Technical Professionals Pathway | Reservoir Engineering  
Upstream Technical Professionals Pathway | Upstream Management Petroleum Engineering  
Upstream Technical Professionals Pathway | Well Engineering

### PETROPHYSICS

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Upstream Technical Professionals Pathway | Petrophysics  
Upstream Technical Professionals Pathway | Upstream Management Petrophysics

Contact us today to learn more.

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