



CPS



CPS

CANADIAN PETROLEUM SERVICES

Course Catalogue for **T**echnical and **M**anagement Courses



CPS World wide Franchise

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Course Catalogue

For technical & management courses

CPS Canadian Petroleum Services Inc. is one of Canada's fastest growing training and consulting organizations operating in 9 countries globally.

Since 2000 we have been focused on partnering with leaders in the delivery of training and education to develop employee skills, and to effectively build national and organizational competencies.

CPS is headquartered in Toronto, Canada with a regional office in Dubai, United Arab Emirates. CPS' training focuses on adding value to client organizations through targeted sessions that are relevant, practical and implementable.

We take pride in our innovative approach to training whether our clients require off the shelf courses or tailored training solutions. At CPS, we understand the high-pressure environment that our clients have to deal with and the difficult demands they often need to make.

Our clients demand the absolute best. Which is why they come to us.

Through our client-first philosophy and innovative approach, Canadian Petroleum Services Inc. is able to deliver quick, efficient and powerful results to our clients. This enables our partner organizations to achieve their objectives and to develop the learning competencies required in order to advance their organizations.

At CPS we appreciate each organization's unique challenges and training needs; and work with our clients to identify the best approach to overcome them.

Our approach focuses on using effective methods, tools and approaches to deliver training courses that offer results to our clients. We continually examine trainee learning progress in our courses, with a pre-test and a post-test for each course, and use our own experience to inform teaching styles, combining industry-tested methods with our own lessons-learned from training programs across various industry sectors.

Our success is dependent on our ability to develop true partnership with our clients, understand their specific training needs, providing courses that are relevant to their contexts.

Canadian Petroleum Services Inc. provides its clients with a truly capable business partner who helps their organization achieve their desired results.



KBR
1300 Wellington Street West, Toronto, ON

Date: 20 September 2013

Canadian Petroleum Services, Inc. (CPSU)
45 Sheppard Avenue East, Suite 200
Toronto, Ontario, M2N 1W8
Canada
Attention: Mr. Nazmi M. Nazmi

Subject: Sudera Project
Invitation to Bid No. IND-AS94-0004
Topic: Root Cause Investigation Train

Dear Mr. Nazmi

Sudera and KBR wishes to advise Canadian Petroleum Services, Inc. regarding the subject work for the Sudera Project with the following details:

Sudera and KBR recognize Canadian Petroleum Services, Inc. as a leading provider of services in the industry and we are pleased to have you as a qualified contractor for the subject work. We look forward to opportunity for future projects.

Respectfully,

Ryan Thomson
Ryan Thomson
KBR Sr. Subcontract Administrator

الجمهورية العربية السورية
Ministry of Petroleum
February 12, 2014

Mr. Ahmed Al-Sabeh
VP Business Development
CPS Canadian Petroleum Services
45 Sheppard Avenue East,
Suite 200 North York, ON
Canada
Fax No: 416-418-5004

Dear Mr. Ahmed

Subject: Training Provider

We thank you for submitting your application to provide training for the subject work. We are pleased to inform you that you have been selected as the preferred provider for the subject work.

The training will consist of 10 modules and will be delivered in Arabic. The training will be held in the city of Damascus, Syria. We are pleased to have you as a qualified contractor for the subject work. We look forward to opportunity for future projects.

Respectfully,

Shehla Nasir Al-Sabeh
Shehla Nasir Al-Sabeh
VP Training and Client Development

Introduction

The purpose of this course is to provide an overview of the CPSU and its role in the industry. The course will cover the following topics:

Key Points

1. Overview of the CPSU and its role in the industry
2. The importance of safety and health in the industry
3. The role of the CPSU in promoting safety and health
4. The importance of environmental protection in the industry
5. The role of the CPSU in promoting environmental protection

Standard for Designing Questions

Questions should be designed to measure the following:

- Knowledge of the subject matter
- Ability to apply the subject matter
- Ability to analyze the subject matter
- Ability to evaluate the subject matter
- Ability to create the subject matter

Certificate of Affirmation

International Association for Health and Occupational Safety and the Environment

CANADIAN PETROLEUM SERVICES INC.

American Institute

American Group for Health and Occupational Safety

FEBRUARY 2013

John Smith

CERTIFICATE OF AFFIRMATION

International Association for Health and Occupational Safety and the Environment

CANADIAN PETROLEUM SERVICES INC.

INTERNATIONAL ASSOCIATION FOR HEALTH AND OCCUPATIONAL SAFETY AND THE ENVIRONMENT

November 2014 to November 2015

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Examples of current and recent clients include:



Upstream Courses

Exploration and Seismic Courses



- Seismic field procedures course: (10 days)
- Course in seismic processing procedures
- Course in seismic processing procedures and AVO
- Seismic Interpretation Course (Including Field trips)
- Acoustic Inversions
- Lateral reservoir prediction and fracture prediction and analysis
- Course in 3-dimensional seismic
- Introduction 2D versus 3D Course Its uses in structure and stratigraphy.
- Modelling 2D versus 3D
- Interpretation methods of 3D data
- Field design methods and considerations
- Processing methods and pitfalls
- Examples of 3D versus 2D advantages
- Seismic for Geologists and Engineers course
- General overview and history of seismic
- Forward modelling and inversions
- Velocity and density versus lithology
- The earth model, raypaths and travel times
- Dipping layers and complications
- Seismic waves
- P and S waves
- Diffractions
- Fractured reservoirs and lateral identifications
- Velocity & Amplitude Course
- Amplitude versus offset
- Rock physics and seismology
- Digital aspects of seismic
- Concept of convolution, reflectivity and wavelets
- Field problems and design
- Processing principles

- Seismic stratigraphy
- Complex structures and reefs
- VSP 's
- Time lapse seismology 4D Course



Sample Agenda Drilling Practices

Drilling Courses



- Basic Technical Drilling Terminology
- Guidance and Warning Signs in Drilling Site
- Technical Drilling Report Handling
- Petroleum Industry Overview
- Rig Components
- Drill String
- Mud System
- Drilling Operations
- Well Completion, Work over and Well Control
- Oil Business
- Rotating Equipment
- Casing & Cementing
- Offshore Drilling
- Rig Mathematics
- Gas Liquid Separation
- Oil Water Separation
- Water Treatment and Water Injection
- Flare System
- Process Control for Production Operators
- Wellhead Operation and Troubleshooting
- Process Heaters
- Pipeline Pigging Operation
- Equipment Commissioning and Start-Up
- Horizontal and Multilateral Wells (Analysis and Design)
- Stuck Pipe
- HPHT Well Planning Design
- Advanced Casing Design
- Well Integrity
- Directional Horizontal and Multilateral Well Drilling
- Basic Drilling Technology

- Basic Drilling, Completion and Work over Operations
- Drilling Fluids Technology
- Cementing Operations
- Gas Lift
- X-mas Tree, Wellhead Operations and Testing
- Reservoir Characterization/ Description (including Facies and Rock Typing)
- HPHT Wells Planning and Operations
- Advanced Casing Design
- Well Planning and Design
- Open Hole Logging Methods and Formation Evaluation
- Petroleum Economics
- Integrated Production system, Gathering Network and Flow of Fluids
- Advanced Well Test Analysis
- Fractured Reservoir Characterization with Emphasis on Carbonates
- Advanced Structural Geology
- Coring and Core Analysis
- Applied Geostatistics
- Reservoir Simulation Workshop
- Evaluation and Developing Shale Gas
- Production Logging
- Nodal Analysis Advance
- Basin and Play Fairway Analysis
- PVT Properties of Reservoir Fluids
- Development Planning (from appraisal to abandonment)
- OIP estimation and range of uncertainty
- Slick Line
- Heavy Oil Exploitation



Foundation Courses for Reservoir Engineers

- Introduction to the Oil and Gas Industry
- Exploration for Oil and Gas Reserves
- Basic Petroleum and Reservoir Geology
- Reservoir Rock and Fluid Properties
- Basic Drilling Technology
- Basic Reservoir Engineering
- Basic Production Operations
- Surface Production Facilities



Reservoir Engineering

- Formation Evaluation (OH Logging and Core Analysis)
- Fluid Sampling and PVT Analysis
- Basic Well Testing
- Advanced Reservoir Engineering
- Advanced Well Testing
- Water-Flooding
- Enhanced Oil Recovery Technology

Well Engineering for Reservoir Engineers

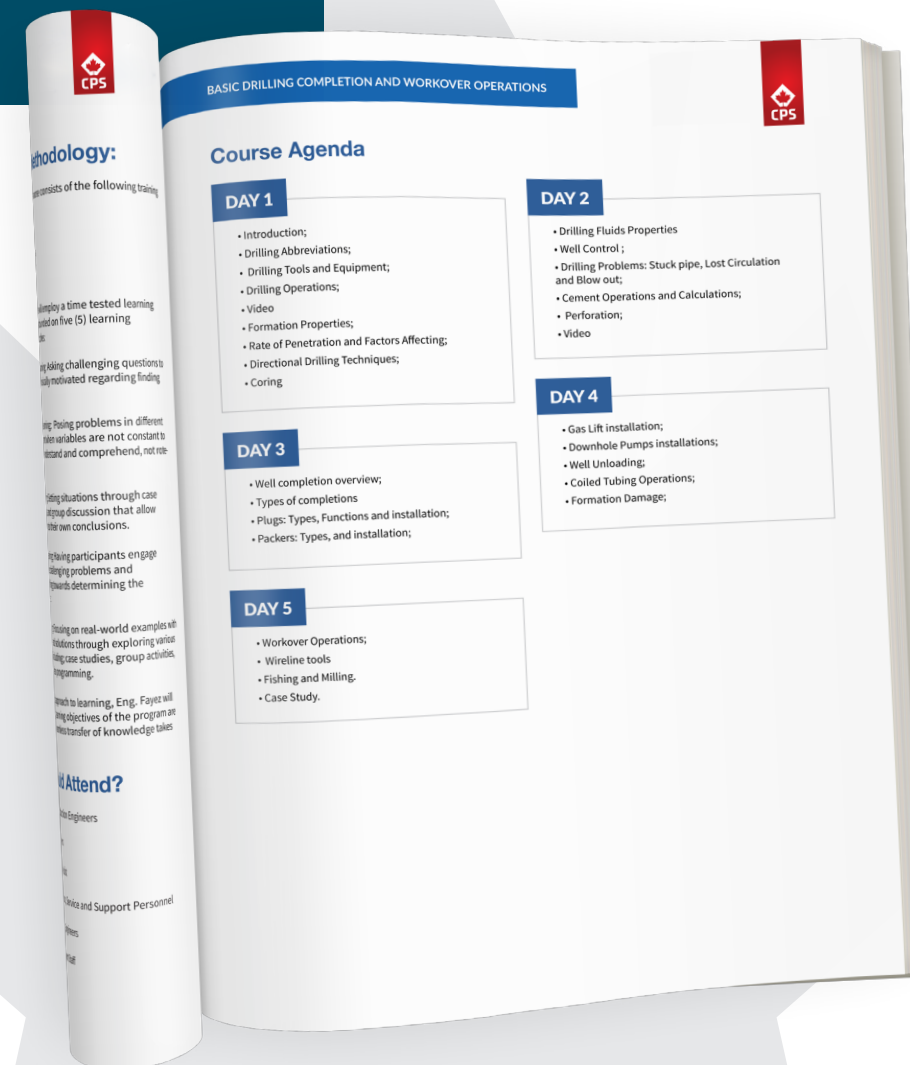
- Directional, Horizontal and Multilateral Drilling
- Casing and Cementing Design
- Drill String Design
- Well Control
- Well Completion and Workover Operations

Production Engineering for Reservoir Engineers

- Production Optimization using Nodal Analysis
- Artificial Lifting Technology
- Formation Damage
- Production Logging
- Well Stimulation Technology
- Wire-Line Operations
- Corrosion and Integrity Management

Sample Agenda

Drilling completion and work over operations





Production Engineering for Reservoir Engineers

- Introduction to Reservoir Simulation
- Applied Reservoir Engineering
- Applied Reservoir Simulation
- Reservoir Management Strategies
- Mature Oil Fields

Subsurface courses

- Advanced Drilling Practices
- Rock Physics and Petro Physics for Seismic Interpretation
- Advanced Well Test Analysis (PTA, Interference Test Etc.)
- Rock Properties and Rock Mechanics
- Project Management (Oil and Gas)
- SCAL: Programming Design, Implementation, QC and Evaluation
- Advanced Cementing
- Fluid Properties Phase Behaviour (PVT)
- Advanced Completion Design
- Advanced EOR/IOR
- Workover Practices
- Directional Drilling Horizontal and Sidetracking
- Sedimentology and Sequence Stratigraphy
- Advanced Casing
- Artificial Lift Systems (Selection and Design)
- E&PD Contracts (Policy, Process, Monitoring and Assessment)
- Heavy Oil Processing
- Environmental and Waste Management
- Cased Hole Logging
- Play Assessment and Prospect Evaluation
- Pore Pressure and Well Control
- Project Uncertainty Decision Analysis and Risk Management
- Reservoir Characterization a Multi-Disciplinary Team Approach
- Resource and Reserve Evaluation



Downstream Courses



Maintenance Management Courses

- Maintenance Management Modular I
- Maintenance Management Modular II
- Maintenance Management Tools and Techniques
- Plant Wellness Process Reliability and Life Cycle Cost
- Reliability Centered Maintenance
- Root Cause Analysis Methodologies
- Root Cause Analysis Methodology Using Apollo Software
- Maintenance Management Best Practices Tools and Techniques
- Maintenance Planning and Scheduling
- Maintenance Technology Best Practices Inspection Analysis and Monitoring
- Shutdown and Turnaround Management



Electrical Engineering Courses

- Electrical Diagrams
- Power Transformers
- Motor Control Circuit Troubleshooting
- Electric Motors, Protection, Testing and Maintenance
- National Electric Codes (NEC 2008)
- Electrical Equipment Maintenance, Testing, Inspection and Risk Assessment
- Emergency Diesel Generator Unit
- Grounding of Utility and Industrial Distribution Systems
- ABB MV and VCB Switchgears
- Uninterruptable Power Supply (UPS) System
- Power Electronics
- Electric Motor Drives
- P&ID Reading
- Power Systems
- Power Transformers
- 13.8 KV Generator Construction, Operation, Protection, Voltage Regulation, Testing and Maintenance
- Emergency Diesel Generators
- Electrical Diagrams
- Power Electronics
- Motor Control Circuit Testing and Troubleshooting
- Operation, Protection & Maintenance of Electrical Motor
- LV & MV Switchgears & Circuit Breakers
- Stationary Battery Systems
- Uninterruptable Power Supply (UPS) System
- National Electrical Code (NEC 2008)





- Cables: Selection, Testing, Splicing & Installing
- Troubleshooting Power Distribution System

Mechanical Engineering Courses

- Valve Troubleshooting and Maintenance
- Pumps Troubleshooting and Maintenance
- Centrifugal Compressors Maintenance
- Reciprocating Air Compressors Maintenance
- Vibration Analysis of Rotating Machinery
- Mechanical Alignment (Hands on Training)
- Balancing of Rotating Machinery
- Routine Maintenance of GE Gas Turbine Units
- Emergency Diesel Generator Preventive Maintenance
- Heat Exchanger Troubleshooting & Maintenance
- Lubrication Technology & Bearing Servicing
- Process Fired Heater Troubleshooting & Maintenance
- Boiler Troubleshooting & Maintenance
- Process Fired Heaters
- Journal Bearing Maintenance
- Centrifugal Gas Compressors
- Pumps and Compressors in Oil & Gas Facilities
- Lubrication and Predictive Maintenance
- Best Practices in Maintenance Management
- Machinery Bearings and Lubrication
- Elliott Ebara Centrifugal Gas Compressors
- Off-shore Multi-stage Electrical Submersible Centrifugal Pumps (ESP)
- Alignment of Vertical Goulds Centrifugal Pumps

Instrumentation Engineering Courses

- Practical Measurements of Process Variables
- Gas Measurement & Flow Metering Station
- Control Valves, Actuators and Positioners
- Control Valves Sizing, Selecting & Maintenance
- Rosemount Transmitters installation, Maintenance and Calibration
- Radar Technology for Tank Gauging
- PLC Programming, Troubleshooting & Maintenance
- Boiler Control and Instrumentation
- Safety Instrumentation and Emergency Shutdown
- 475 Field Communicator
- Allen Bradley Control Logic Fundamentals & Maintenance
- Thermograph Infrared Camera
- Distributed Control System (DCS)
- Process Control for Production Operators
- SCADA Systems



Process Engineering Courses

- Process Heaters (Operations, Control, Safety and Troubleshooting)
- Process Gas Plant Start-up, Commissioning
- Gas Lift Valve Changing and Installation
- Salt Removal from Crude Oil
- Safety Procedure in Laboratories
- NGL Recovery and NGL Fractionation
- Slick Line Operations (Fundamentals and Troubleshooting)
- Laboratory Instruments Calibrations and Troubleshooting Techniques
- Artificial Lift Systems
- Petroleum Engineering for Non-Petroleum Engineers
- Sandstone Reservoir Geology
- Advanced Reservoir Simulation
- Coring and Core Analysis
- Formation Damage (Causes, Prevention & Remediation)
- Foundations of Geophysics
- Geo-Statistics in Reservoir Modeling
- Oil and Gas Reserves Evaluation
- Injected and Produced Water Management
- Process Plant Optimization
- Process Plant Troubleshooting
- Production Technology for Other Disciplines
- Production Operation
- Process Control for Plant Operators
- Gas Conditioning and Processing for Engineers
- Gas Conditioning and Processing for Operations and Technicians
- Gas Conditioning and Processing G-4
- Refinery Gas Treating, Sour Water, Sulphur and Tail Gas
- Oil Production and Processing Facilities
- Introduction to Petroleum Refinery Process
- Oil and Gas Separation Plant
- Relief and Flare Systems



Sample Agenda

Plant wellness life cycle cost and process reliability



Sample Agenda

Maintenance Technology
Best Practices Inspection
analysis & Monitoring



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Automation Courses

- Experion PKS Operator
- Allen Bradley Controllogix Fundamentals and Maintenance
- Rosemount Transmitters Installation, Maintenance and Calibration
- Process Control and Production Operators
- Boiler Control and Instrumentation
- Gas Measurement and Flow Metering Stations
- Introduction to Distributed Control Systems (DCS)
- Radar Technology for Tank Gauging
- Advanced Process Control Techniques
- Control Valves, Actuators and Positioners
- Emergency Shutdown System (ESD) on Oil and Gas Installations
- Programmable Logic Controller PLC Architecture and Basic Programming

Gas Processing Courses

- Gas Processing Fundamentals
- LPG Technology
- Flare System
- Boiler and Steam Generation System
- Natural Gas Dehydration
- Sulfur Recovery and Troubleshooting
- Oil & Gas Pipeline Hydraulics and Operation
- Process Heaters

Power Plant Courses

- GE Gas Turbine (MS6001 B) Major Components, Design and Construction
- Speedtronic Mark VLE {HMI} Operations of Gas Turbine Unit
- Oil Systems of GE Gas Turbine Units
- Emergency Diesel Generator Operation & Maintenance
- Air Systems of GE Gas Turbine Units
- Heat Exchangers and Cooling Water System in Power Plant
- GE Gas Turbine Unit Startup and Shutdown
- Fuels and Combustion
- Fans and Application in Power Plant
- Fuel Systems of GE Gas Turbine Units
- Gas Turbine Control and Protection Systems

Refinery and Petrochemicals Courses

Refinery Operator Courses

- Basics of Electrical and Mechanical Operators
- Electrical and Mechanical hazards and safety
- Electrical Motor operation an Application (Pumps, Compressors, Coolers)
- Heaters
- Standby Diesel Generators
- Electrical Installation in Hazardous Areas
- Pressure Relief Valves
- User introduction to PLC , DCS
- Process Measurement (Flow, Pressure, Temperature)
- Instrument installation in Hazardous Areas
- Furnaces
- Process Fundamentals
- Fired Heaters for General Refinery Services
- Shell-and-Tube Heat Exchangers
- Pressure Vessels and Boilers
- Piping System Components
- Steel Gate Valves - Flanged and Butt- Welding Ends, Bolted, and Pressure Seal Bonnets
- Compact Steel Gate Valves - Flanged, Threaded, Welding and Extended Body Ends
- Pressure-Relieving Devices



Health, Safety Environment and Soft skills Courses

Health Safety Environment Courses

- Industrial Safety
- Naturally Occurring Radioactive Materials (NORM)
- Industrial Safety and Housekeeping
- Warehouse Safety
- Process Safety Engineering
- Safety in Power Plant
- Electrical Hazards
- Hazardous Chemicals Storage and Handling
- Incident and Accident Investigations
- Safety Compliance and Site Inspection
- Basic Safety and Loss Prevention
- Hydrogen Sulphide (H₂S) Awareness
- Fire and Explosion Safety
- Lockout and Tagout (LOTO)
- Plant Operator Responsibilities
- Permit TO Work (PTW)
- Workplace Health Hazard
- Working in Extreme Heat Environment
- Personal Protective Equipment
- Near Miss Reporting Best Practices
- Risk Management and Control
- Ladders Scaffold and Walkways Safety



- Safe Work Practices
- Fire Fighting Principles
- Confined Space Entry
- Job Safety Analysis (JSA)
- Detection and Control of Stoxi and Flammable Gases in the Oil and Gas Industry
- Safe Use of Tools and Equipment
- Hazard Identification
- Fire Fighting Equipment
- Hazards of Flammable Gasses and Liquids
- Safe Use and Handling of Chemicals
- HSE Risk Assessment
- Oil and Gas Industry Emergency Response
- Defensive Driving




Soft skills and Leadership Courses

- Customer Service - Call Centers
- First 90-Days - Tune up for success
- HR Diploma.
- Coaching Practices
- Facilitation Skills






CPS

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