WHO SHOULD ATTEND
This program is intended for managers in the oil and gas industry. Individuals who hold very senior positions in exploration, production, refinery and marketing, and the people who support them, are invited to attend.

PROGRAM FEE

INSTRUCTORS
David A. T. Donohue, PhD
Ethan Aulen, PhD
Charles Blankman, PhD
Y. Serdar Dogulu, PhD
Jack A. Slotnick, CPEA
Bradford R. Donohue, MBA, CPA
Marshall E. Frank, BS
John B. (Jack) King, MBA
Michael Lynch, MS
Skip Mayan, JD
Robert Meyers, MA
Kris Romanichuk, PhD
Robert F. Ryan, MS
Jack A. Stolick, CPA
Robert W. Taylor, MS
Laura Vavola, MS, Eng

27th Annual International Petroleum Management Certificate Program

For more than twenty years, participants have consistently called this the “best management program in the petroleum industry today.” The four-week program provides learning in four key areas and includes compelling lectures by a strong and diverse faculty, as well as team participation in HRCDC’s unique and challenging oil and gas business games.

WHO SHOULD ATTEND
This program is intended for managers in the international petroleum and natural gas industry, including exploration, production, refinery and petrochemical operations, marketing, law, human resources, accounting, and finance. More than 1,700 managers have taken this program, including individuals who hold very senior positions in the oil and gas industry.

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PROGRAM FEE

UNIT ONE: SEPTEMBER 11 – 15, 2017

UPSTREAM SECTORS, PROJECT ECONOMICS, AND PETROLEUM ACCOUNTING

Overview of the Energy Industry
Oil and gas measurements and units, the value chain; market structures; worldwide oil and gas economics; major players; evolution of the integrated oil and gas business.

Crude Oil and Natural Gas Pipelines
Introductions to crude oil and natural gas pipelines; design, construction, and operation of pipeline systems; estimating project costs; pipeline contracts and tariffs; new pipeline developments.

Host Government Agreements
Typical hotel country exploration agreements; summary of the history and key provisions, including bonus payments, royalties, taxes; production sharing; participation arrangements.

Exploration Methods
The exploration process: petroleum geology; exploration geophysics; well logging; developing exploration prospects; preparing and interpreting geological maps; case studies.

Drilling and Well Completions
Planning the well; logistics; drilling functions; drilling procedures; formation evaluation methods; horizontal wells; improvements in drilling.

Field Development and Production Cycle
Onshore and offshore field development and long-term production substrate design; reservoir fundamentals and reserves estimation; field development; infield performance; integrated reservoir management; and enhanced recovery. Surface facilities design; design for both onshore and offshore operations; production operations and management; investment analysis and reporting of performance; case studies.

Unconventional Oil and Gas Resources
A comprehensive and practical understanding of the resources that are applied in the development of unconventional oil and gas projects, by looking at some active investment areas.

Energy Project Economics
Economic yield, project cash flow before and after tax; capital and operating costs; net cash flow stream and payout time; value of money, opportunity cost and present value of net cash flow; discounted cash flow analysis and internal rate of return; risk assessment and sensitivity analysis; examples of the economies: analysis of energy projects.

Crude Oil Tanker Transportation
The tanker industry and market trends: an overview of the characteristics of crude tankers; capital and operating costs; pollution at sea and new regulations; calculating tanker transportation rates; Worldwide charter arrangements.

Worldwide Petroleum Economics
Worldwide energy supply; demand, reserves, pricing, corporate strategy; recent history and prediction of future trends; how petroleum economists make predictions.

Worldwide Oil and Gas Pipelines
Development of the free market for oil and gas; current international market structure; regional markets: physicals, futures, forwards, derivatives, options; roles of participants; pricing, formation; pricing volatility; price reporting; crude oil and product pricing; negotiating and pricing; petroleum sales contracts; introduction to hedging and price role management.

Canada and Mexico
Commodity trade; analysis of oil and gas; market structure; trends and market conditions.

Worldwide Petroleum Business Game: Sandland
The business game during UNIT One and Two is an integral part of the learning process. Participants, divided into teams, make real-life technical, financial, and market decisions that commonly confront managers in the international petroleum business today. Team performance is measured on a financial basis and is catalyzed by healthy competition.

The international petroleum business game takes place in “Sandland,” a fictitious country on the west coast of Africa. Team objectives include developing oil and gas reserves and deciding on the optimal way to develop and market the production. During each workshop session, teams are provided with technical and economic background that serve as bases for decisions to be made during that session. Team decisions are made and require a commitment of both capital and operating funds and occur during the following intervals: three years of exploration, two years of development, and fifteen years of production.

WORKSHOP SESSIONS INCLUDE:
- Introduction to the workshop
- Negotiating the right to explore in Sandland
- The exploration survey stage
- Exploration and delineation drilling
- Reservoir combination and field development
- Gas processing
- Oil and gas pipelines and port facilities
- Sandal operations accounting
- Combined cycle power plants
- Water sharing decisions
- Refinery development decisions
- Financing the port expansion
- Offshore plants
- Gas export pipeline decisions
- Crude oil marketing decisions
- Strategic planning and decision analysis
- Evaluation of performance and presentation of results

LEARN MORE OR REGISTER FOR PROGRAMS AT WWW.HRCDC.COM
**Workshop Sessions Include:**
- Project description, management, and market analysis
- Project economics and performance analysis
- Project schedule and management plan
- Identifying the project risk
- Reviewing the financing terms sheet
- Design the project financing
- Review the fuel supply and power sales agreements
- Evaluation of performance and presentation of results

**The Process of Commercializing Energy Projects**
Key steps in the formation and commercialization of an energy project—from opportunity to operation: screening and feasibility analysis; design and development; key project agreements; preparing preforma financial projections; risk analysis and risk management; project management; project definition; resource scheduling; cost estimating; project controls; cost engineering; detailed engineering; procurement; construction management; project accounting and auditing; environmental management. Project Management Institute (PMI) body of knowledge and certification requirements.

**Project Planning and Management of Energy Projects**
Steps in the development of a petroleum project: screening studies; feasibility studies; detailed engineering; environmental studies; financing—construction and operation. Project management examples of energy projects: the integrated planning and development of an international combined cycle power plant. Case study: Developing the Southam Gas Storage Facility.

**Health, Safety, and Environmental (HSE) Challenges in Petroleum Operations**
Worldwide developments in HSE performance, management, and regulations; key technical, managerial, and societal issues and responses; sustainable development; eco-efficiency; social impact; factors that affect cost; integration of HSE in the business; risk acceptance and tolerance; due diligence; accountability; liability; integrated health, safety, and environmental management systems, international standards, ISO 14001 certification, EMAS verification, audit, reporting and assurance to stakeholders.

**Petroleum Law**
Key legal issues in petroleum management: transnational and international oil and gas law; the role of law in commercial transactions; role of the attorney; commercial relationships; host country agreements and government relations; joint venture agreements; oil and gas contracts and agreements; crude oil sales and transportation; risk management and dispute resolution.

**Financing of Energy Projects**
Financing petroleum projects; sources of debt and equity; preparing the financing proposal; negotiating financing; reaching the decision to proceed; project financing; structuring; role of multilateral and bilateral agencies; case studies: project financing of international oil, gas, and power projects.

**Industry Regulation, Derogation, and Convergence**
The nature of regulation in the energy sector; history and current state of the gas industry deregulation process at the wholesale and retail markets. U.S., Europe, and elsewhere; effect of deregulation on the structure of the industry; convergence of gas and power.

**Leadership Skills Needed for High Performance Organizations**
Effective leadership and management: motivation; managerial styles; organizational climate; goal setting and action planning; leading change methodology; simulation, presentation, discussion, case studies, small group work, and assessment.

**Leadership Case Study: Transforming the U.S. Marketing and Refining Division of a Major Oil Company**
How a major oil company went from last to first in net margin per gallon in the marketing and refining of gasoline in the U.S. How strategic planning, leadership skills, and the use of the Balanced Scorecard were fundamental to this success.

**Current HR Practices in International Oil and Gas**
Current HR policies and procedures, organizational design, recruitment, manpower planning and development in the performance of the organization; defining job-specific competency models and development plans.

**“Great program. It was useful for understanding technical things and deepening knowledge of commercial aspects.”**
—Participant

**DEVELOPING NICOLA’S STRATEGIC PLAN: NICOLA**
During Unit Four of this program, teams have been retained to work with a small U.S. company of exploration specialists, Nicola. They have made a major oil and gas discovery on a shallow offshore block licensed by the Republic of Nicola, an island republic off the west coast of Africa. Reports state that two major discoveries were made: an oil reservoir containing an estimated 50 million barrels in-place and a deeper gas discovery containing an estimated 3 TCF in-place. The team assignment is to develop a strategic plan.

A consultant has provided the company with a menu of options that it could pursue to maximize the value of its discoveries. It will be up to teams to decide on Nicola’s business strategy and then prepare and implement a plan to achieve strategic and business goals.

**Workshop Sessions Include:**
- Identify Nicola’s strategic plan, vision, and mission
- Prepare a big picture view of Nicola’s needs and opportunities
- Create strategic plan in Balanced Scorecard
- Adopt Balanced Scorecard in implementation plan