

# Training for the Oil & Gas Sector

## Oil & Gas Program Highlights

### Program

- Program is designed to meet the educational and training needs for oil and gas technical and engineering professionals
- Certificate upon completion
- Training Areas:
  1. Process and Operations
  2. Drilling
  3. Mechanical
  4. Electrical
  5. Instrumentation
  6. HSE
  7. Project Management
  8. Supply Chain Management
- Flexibility to adjust topics, curricula and dates
- Professional: The Oil & Gas Programs are delivered over three terms of study (approximately 40 weeks including between term breaks) or four terms (approximately 52 weeks including between term breaks) where additional advanced technical training and team management skills are incorporated. The first term of the program is dedicated to English language and communication skills training while the remainder of the program focuses on the technical specialty of participants.
- Exciting field trips included

### Quality

- Education and training are driven by learning outcomes
- Excellent customer service
- Highly ranked university:

**European CEO Magazine:** in 2017 the MBA program was selected as one of the top programs in the world and one of the top four programs in the United States; the program won the Global Business Education Award.

**Forbes list of "America's Best Colleges":** for the sixth consecutive year, CSUSB made the Forbes list which measures the top 20% of all U.S. undergraduate institutions.

### Location

- Modern campus facilities and a variety of on-campus social activities
- CSUSB's central location opens up endless possibilities of things to do in Southern California
- Beaches, mountains and deserts are about an hour away from the campus
- The campus is an easy drive to Los Angeles, Las Vegas, San Francisco and San Diego for short weekend trips
- Southern California is the most attractive international education destination in America

## Executive Project Management for Oil & Gas Professionals

This program is suitable for all field and administration employees and supervisors who are hoping to gain a strong understanding of project management. Content includes classes in Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communication Management, Project Risk Management, Project Procurement Management, and Project Stakeholder Management. Participants with good statistical background are also introduced to Six Sigma problem solving using the DMAIC model.

## Oil & Gas Operations

This extensive program covers principal areas in practical drilling and production engineering in the oil and gas industry. Classes comprise a wide spectrum of topics including well control, drilling basics, casing, cementing, discovery wells, PVT, pressure transient analysis, EOR, accelerated recovery versus maximizing ultimate recovery, proper well construction, zone isolation, squeezing, artificial lift, casing and wellhead design, completions overview, shallow versus deep, troubleshooting poor performing offset wells, stimulation, fracturing and acidizing, fracture design choices, monitoring acid diversion with fiber optic, facilities design, oil and gas measurement and sales.

## Mechanical & Compressor Maintenance

The program includes classes on the following topics: Introducing Mechanical Maintenance: Maintenance Types & Strategies (Breakdown Maintenance, Preventive Maintenance, Predictive Maintenance, and Proactive Maintenance), Compressors: Methods & Types (Reciprocating [Single-Acting, Double-Acting, Single-Stage, and Two-Stage], Ejectors, and Dynamic [Centrifugal and Axial Compressors]), Pumps: Operation, Maintenance & Troubleshooting (Reciprocating, Centrifugal, Turbines, and Rotary), Valves: Types, Purposes & Flow Calculation [Gas and Oil], Gas Turbines: Description, Principles of Operation, Components, Industrial Types – Categories [Single-Dual-Twin Shaft] and Cycles. Depending on participants background and previous training, this program may expand to topics such as Vibration Analysis for Predictive Maintenance, Advanced Techniques in Preventive Maintenance, Advanced Valve Selection, Maintenance & Repair, Advanced Operation and Maintenance of Rotating Equipment, Lubrication, Welding Technology, and Corrosion.

## Oil & Gas Supply Chain Management

The ultimate objective of this program is to equip participants with sound skills for domestic and international logistics and supply chain management. This program provides skills and knowledge in enterprise resource planning, decision making in supply chain and transportation management, transportation systems management, quality management, logistics strategy, transportation issues and development, information mapping and data visualization, and international logistics. Logistics management involving oil and gas products within and across borders are included, as well as international business environment, international transportation, intermediaries, import/export regulations, payment and risks, and cultural differences of the global supply chain.

## Programmable Logic Controllers & Digital Circuits

This program focuses on programmable logic controllers and digital circuits used in oil & gas facilities. Content is designed to revise the basics and gradually advance in level to advanced PLC topics and functions. Modules in this program are designed to include, PLC fundamentals, analogue controllers, digital controllers, control performance, ladder logic diagrams, advanced PLC functions, open and closed loop systems, Proportional Integral Derivative (PID), Allen Bradley ControlLogix, and Siemens S7-300/400. More modules are added as they relate to participants' backgrounds and instrumentation used in their company fields.

## Electrical Operations & Maintenance

While this program is designed primarily for technical works, electrical engineers in oil and gas facilities can also benefit from a refresher and updates on the advances in the field. Modules in this program are designed to include cathodic protection, lighting and small power, electrical faultfinding and troubleshooting, hazardous areas classification and installation, earthing systems, protection systems and equipment, power generation systems and equipment, low voltage distribution systems and equipment, high voltage distribution systems and equipment, electrical transformers, power quality and management, uninterruptable power suppliers and battery banks, electrical pumps, motors and MCC.

## Health, Safety & Environment

The Health, Safety and Environment (HSE) in Oil & Gas Industry Program is designed to promote the knowledge and skills of professionals responsible for safety in oil and gas facilities. Modules in this program are designed to include current technology and practices that increase trainees' effectiveness and raise awareness of the various aspects of HSE functions in oil and gas facilities. These include such topics as HSE tools, standards, measurement, competency requirements, permit-to-work systems, startup and shut down of hydrocarbon involving operations, HSE management context, oil spill and explosion response, risk assessment, incident investigation, extraction and processing hazards, risk management techniques, safety case management, medical emergencies, HSE auditing, environment management, radiation, NORM (regulations and processes), and HSE technical report writing.

**For program fees and dates, please  
contact the program administrator at [ealfattal@csusb.edu](mailto:ealfattal@csusb.edu)**

## About the Location

San Bernardino is located in Southern California approximately 60 miles (96km) east of Los Angeles. The campus is at the base of the San Bernardino Mountains. Students can enjoy leisure time at the beautiful lakes, or participate in winter sports such as skiing, ice skating, and snowboarding.

Students can also travel to popular California beaches and experience surfing, beach volleyball and the famous landmarks. Surrounding attractions include Disneyland, Universal Studios, Hollywood, Rodeo Drive in Beverly Hills and many others.

## Contact Us

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