



Petroleum Services Associate of Science Degree

Program Goals:

Upon graduation students should be able to:

1. Research problems using basic principles of scientific concepts.
2. Communicate technical information to team members in a professional manner.
3. Understand the importance of training, continued education and professional development for career advancement.
4. Obtain gainful entry-level employment in a petro-technical position.

Program Competencies:

Graduates will demonstrate the following knowledge, skills and abilities:

1. Research federal and state regulations, consensus standards and industry best practices pertaining to the oil and gas business or operation using appropriate tools and references (e.g., world wide web; industry software; and API references) to obtain data.
2. Define the common terminology used in all phases of the petroleum industry and the business segments that make-up the petroleum industry, including the physical and historical geologic origins of petroleum, exploration methods, legal mineral lease arrangements, drilling and completion, production, transportation, refining and marketing.
3. Describe the various methods used in locating possible petroleum deposits through the use of maps, well logs and seismic techniques.
4. Identify the six common types of Mobil Offshore Drilling Units (MODU), common tools, components and the advantages and limitations of each.
5. Identify and explain the composition and physical properties of natural gas and oil and the different types of well producing and conditioning equipment used in processing hydrocarbons which include the glycol dehydration system, natural gas compression equipment, and various measurement and correction factors.
6. Describe the components and processes required for safe production, storage and transportation of hydrocarbons taking into consideration the chemical and physical variables which include pressure, temperature, volume and flow of hydrocarbons.
7. Perform technical calculations using a scientific calculator to determine computations in reservoir studies, oil production, gas production and drilling operations performed by petroleum industry personnel.
8. Describe various well stimulation treatments (e.g., acidizing; water flooding; and fracturing) and interventions used to maintain and improve production rates in existing oil and gas wells.
9. Demonstrate leadership abilities to effectively work and interact in a team environment involving company initiatives.
10. Understand the organizational roles, responsibilities and professional ethics within the management, supervisory and technical levels of the petroleum industry.