



Electrical Submersible Pumps

MODULE

About the Skill Module

An electric submersible pump is a specialized device used in the oil and gas industry. It's essentially an electrically powered pump designed to operate deep within an oil well. This pump is submerged in the wellbore and is responsible for lifting crude oil and other fluids from the reservoir to the surface. By using electricity to power the pump, it efficiently moves the petroleum to the surface for further processing and distribution. Electric submersible pumps are a crucial technology in the oil industry, ensuring the efficient but costly extraction of oil from deep underground reservoirs.



[See example online learning module](#)

Target Audience

Petroleum engineers, production operations staff, reservoir engineers, facilities staff, drilling and completion engineers, geologists, field supervisors and managers, field technicians, service company engineers and managers, and especially engineers starting a work assignment in production engineering and operations or other engineers seeking a well-rounded foundation in production engineering.

You Will Learn

Participants will learn how to:

- Identify the three critical Electrical Submersible Pump (ESP) design challenges: solids (sand), gas, and dependable power, to maximize ESP run life, as the average industry ESP run life is approximately 2.4 years)
- Understand the principles of downthrust, upthrust, pump efficiency, total dynamic head (TDH), number of stages required, and pump horsepower required to successfully operation ESPs
- Recognize the characteristics of ESP electrical cable, variable speed drive, and controller components in a functioning ESP

Product Details

Categories: [Upstream](#)

Disciplines: [Production and Completions Engineering](#)

Levels: [Basic](#)

Product Type: Individual Skill Module

Format: On-Demand

Duration: 1.5 hours (approx.)

\$250.00