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Python for Oil & Gas: Data Analytics and Automation

COURSE OVERVIEW

This course is designed to introduce professionals in the oil and gas industry to the powerful capabilities of Python for data analytics and automation. Participants will learn how to harness Python to collect, clean, analyze, and visualize data while building automation workflows that streamline repetitive tasks in exploration, drilling, production, and operations. Through practical examples and industry-relevant case studies, the course bridges the gap between domain expertise and modern digital skills, empowering participants to make data-driven decisions and improve operational efficiency.

WHO SHOULD ATTEND?

This course is ideal for petroleum engineers, geoscientists, reservoir engineers, drilling and production engineers, data analysts, and technical professionals in the oil and gas sector who want to expand their skill set with programming and automation. It is also suitable for managers and decision-makers seeking to understand the value of data analytics and automation in optimizing operations. No prior programming experience is required, though familiarity with oil and gas workflows will be beneficial.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the fundamentals of Python programming applied to oil and gas workflows.
- Perform data cleaning, analysis, and visualization using libraries such as Pandas, NumPy, and Matplotlib.
- Automate repetitive tasks to save time and reduce human error.
- Apply Python-based analytics to solve real-world challenges in exploration, drilling, reservoir management, and production.
- Integrate domain knowledge with digital skills to drive efficiency and innovation in oil and gas operations.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- Python applications tailored to oil and gas challenges.
- Hands-on projects with real-world datasets.
- Step-by-step guidance for beginners and intermediate learners.
- Practical focus on automation, reporting, and visualization.
- Case studies showcasing how Python adds value in upstream and downstream processes.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded