

# OIL & GAS PRACTICAL ORIENTED SUMMER INTERNSHIP

1 Month Training



# Internship Objective:

Embark on a transformative journey into the heart of the oil & gas industry with our comprehensive summer internship program. Designed to provide an immersive experience, our objective is to equip participants with fundamental and interior knowledge across key domains including drilling, production, completion, reservoir management, well testing, well logging, o shore operations, directional drilling, and well intervention. Throughout the program, interns will delve into the intricacies of these sectors, gaining valuable insights and practical skills essential for success in the dynamic world of oil & gas.

# **Learning Objectives:**



Explore the complexities of completion techniques and well testing methodologies.



Master the interpretation of well logging data and its significance in reservoir evaluation.



Familiarize yourself with offshore drilling operations, including safety protocols and environmental considerations.



Acquire knowledge and proficiency in directional drilling techniques for optimal wellbore placement and reservoir recovery.



# **Prerequisites:**

Students interested in participating in this internship should possess a basic understanding of engineering principles, particularly in the fields of mechanical, petroleum, or any related engineering. Additionally, familiarity with fundamental concepts will be advantageous.

# **Benefits of Learnings:**

- Foundational Knowledge: Develop a solid understanding of the core concepts and processes integral to the oil & gas industry.
- **Expert Guidance:** Receive mentorship and guidance from industry professionals with extensive experience in various facets of the field.
- **Doubt Clearance:** Engage in interactive sessions and discussions to clarify doubts and deepen comprehension.
- Career Advancement: Gain a competitive edge in the job market and position yourself for lucrative career opportunities within the oil & gas sector.

# Topics to be covered:

- 01 Introduction to Oil & Gas Industry
  - Historical overview of the industry
     Global energy demand and
  - consumption trends
  - Major players in the oil & gas sector
  - Economic significance & geopolitical factors
- O2 Petroleum Geology & Exploration Techniques
  - Formation of hydrocarbons and reservoirs
  - Sedimentary basins and structural geology
  - Seismic surveying methods
  - Well-site geology and prospect evaluation
- O3 Formation of hydrocarbons and reservoirs
  - Types of drilling rigs and their components
  - Drilling fluid systems and circulation processes
  - Well control and blowout prevention measures
  - Health, safety, and environmental considerations
- O4 Production Systems and Techniques
  - Primary, secondary, and tertiary recovery methods
  - Artificial lift systems: ESPs, gas lift, and rod pumps
  - Surface facilities: Separation, treatment, and storage
  - Enhanced oil recovery (EOR) techniques

- O5 Reservoir Engineering Fundamentals
  - Reservoir characterization & modelling
  - Fluid properties and phase behaviour
  - Material balance and reservoir performance analysis
  - Reservoir simulation principles
- O6 Surface Facilities and Processing
  - Gathering systems: Pipelines and gathering stations
  - Gas processing: Sweetening, dehydration, and fractionation
  - Environmental considerations & regulatory compliance Oil refining basics: Refinery processes and product distribution
  - Environmental considerations and regulatory compliance
- Well Completion Methods and Technologies
  - Casing design and selection criteria
  - Cementing techniques and zonal isolation
  - Perforating methods and completion accessories
  - Hydraulic fracturing fundamentals
- 08 Well Logging Principles and Interpretation
  - Types of well logs: Electrical, acoustic, and nuclear
  - Logging tools and data acquisition techniques
  - Log interpretation for reservoir characterization
  - Petrophysical analysis and formation evaluation

## op Formation Testing and Well Integrity

- Wireline and formation testing tools
- Pressure transient analysis and well testing interpretation
- Well integrity assessment: Leak detection and casing inspection
- Regulatory requirements for well testing and integrity maintenance

## 10 Offshore Drilling Challenges and Solutions

- Deepwater drilling technologies and equipment
- Subsea production systems: FPSOs, subsea trees, and pipelines
- Environmental and safety considerations in offshore operations
- Environmental and safety considerations in offshore operations

## 11 Directional Drilling Principles and Applications

- Steering tools and surveying techniques
- Horizontal and multilateral well design
- Geo-steering methods for reservoir navigation
- Applications in unconventional reservoirs and offshore fields

## Well Intervention and Workover Operations

- Types of well interventions: Hydraulic fracturing, acid stimulation, and sand control
- Workover rig operations and equipment
- Remedial cementing and wellbore cleanout techniques
- Remedial cementing and wellbore cleanout techniques

This detailed curriculum offers participants a thorough understanding of the oil & gas industry, covering essential topics from exploration and drilling to production, reservoir management, and advanced technologies. Each area is explored in depth to provide interns with a comprehensive foundation for a successful career in the field.





# **FAQs**

### Q 1. What is the duration of the internship program?

Ans. The internship program has a duration of one month, consisting of intensive learning sessions and practical exercises.

### Q 2. What are the course fees?

Ans. Fees - 3500 INR

### Q 3. Will the sessions be recorded for future reference?

Ans. Yes, all sessions will be recorded and made available to participants for review and reference purposes.

#### Q.4. What study materials will be provided during the internship?

Ans. Participants will receive comprehensive study materials, including presentations, handouts, and recommended readings, to supplement their learning experience.

### Q 5. Will certificates be awarded upon completion of the internship?

Ans. Yes, participants who successfully complete the program requirements will receive a certificate of completion, acknowledging their participation and achievement.

### Q 6. Is prior experience in the oil & gas industry required to join the internship?

Ans. No prior experience is required. The program is designed to accommodate participants with varying levels of knowledge and experiences.

### Q 7. Will there be opportunities for interaction with industry professionals?

Ans. Yes, participants will have the opportunity to interact with experienced professionals from the oil & gas industry through guest lectures, Q&A sessions, and networking events.

### Q 8. How will the internship enhance participants' career prospects in the industry?

Ans. The internship will equip participants with valuable knowledge, practical skills, and industry insights, enhancing their competitiveness and opening doors to career opportunities within the oil & gas sector.



# **CONTACT US**



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