



## **Advanced Offshore Operations and Oil & Gas Production Training Course**

**#OG1641**

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## **Course Introduction / Overview:**

Offshore operations represent one of the most complex and technologically demanding areas of the oil and gas industry. From the initial stages of exploration to the final processes of production, the challenges are immense and require a deep understanding of engineering, geology, and safety protocols. This comprehensive training course, presented by BIG BEN Training Center, offers a detailed exploration of the full lifecycle of an offshore field. The program is designed to equip professionals with the knowledge and skills necessary to manage offshore projects efficiently and safely. We cover everything from the geological principles of hydrocarbon exploration and seismic interpretation to the intricacies of subsea production systems and well intervention. The curriculum incorporates insights from leading academic experts, such as Dr. James G. Speight, author of *The Offshore Petroleum Industry: A Brief History and Technology of Oil & Gas Production*. We also delve into the critical areas of risk management, environmental regulations, and decommissioning, which are crucial for sustainable offshore operations. By bridging theoretical knowledge with practical applications, this course provides a holistic view of the offshore sector.

## **Target Audience / This training course is suitable for:**

- Offshore engineers and technicians.
- Geologists and geophysicists.
- Operations and project managers.
- Drilling and completions supervisors.
- Safety and environmental officers.
- Maritime and marine engineers.
- Risk management professionals.

## **Target Sectors and Industries:**

- Offshore oil and gas exploration and production.
- Marine and subsea engineering.
- Energy and resource management.
- Offshore construction and decommissioning.
- Government agencies and regulatory bodies.
- Consulting firms.
- Supply chain and logistics for offshore platforms.

## **Target Organizations Departments:**

- Exploration and production (E&P).
- Operations and maintenance.
- Subsea and marine engineering.
- Health, safety, and environment (HSE).
- Drilling and completions.
- Project management.
- Corporate strategy.

## Course Offerings:

By the end of this course, the participants will have able to:

- Understand the stages of offshore oil and gas exploration and production.
- Analyze geological data for offshore hydrocarbon reservoirs.
- Evaluate different types of offshore platforms and production systems.
- Apply best practices in drilling and well completion.
- Identify and manage key operational risks and safety challenges.
- Comprehend the principles of subsea engineering and technology.
- Develop a plan for effective offshore project management.

## Course Methodology:

This training course is designed to be highly engaging and practical, using a variety of methodologies to bring complex offshore operations to life. We use a combination of detailed presentations, interactive case studies, and group exercises that simulate real-world scenarios. Participants will work through case studies of past offshore projects and incidents to understand the lessons learned in safety, efficiency, and risk management. The course incorporates virtual tours of different offshore platforms and subsea systems, giving participants a visual and conceptual understanding of these complex structures. Team-based problem-solving activities will encourage collaboration and critical thinking, which are essential skills in the offshore environment. Expert-led discussions will provide a forum for participants to ask questions and share their own experiences. The program is focused on providing actionable knowledge and practical skills that can be applied immediately in the workplace. BIG BEN Training Center is committed to delivering a high-quality learning experience that is relevant to the demands of the offshore industry.

## Course Agenda (Course Units):

### Unit One: Exploration and Appraisal Finding the Hydrocarbons.

- Fundamentals of offshore geology.
- Seismic survey techniques and data interpretation.
- Exploration well drilling.
- Reservoir evaluation and modeling.
- Risk assessment in offshore exploration.
- Geophysical and geochemical methods.
- Offshore field development planning.

### Unit Two: Offshore Platforms and Systems Design and Function.

- Types of offshore platforms: fixed, floating, and compliant.
- Subsea production systems and components.
- Wellhead and manifold systems.
- Production and processing facilities on platforms.
- Platform topside and substructure design.
- Pipeline and riser systems.
- Mooring and station keeping.

### **Unit Three: Drilling and Completions the Wellbore Connection.**

- Offshore drilling rigs and equipment.
- Drilling fluid and well control.
- Casing and cementing operations.
- Well completions: conventional and smart wells.
- Horizontal and extended-reach drilling.
- Well intervention techniques.
- Abandonment and decommissioning of wells.

### **Unit Four: Production and Operations Managing the Flow.**

- Hydrocarbon production and separation processes.
- Artificial lift systems.
- Flow assurance management.
- Production monitoring and optimization.
- Maintenance and inspection of offshore facilities.
- Operational safety and risk management.
- Offshore logistics and supply chain.

### **Unit Five: Health, Safety, and Environment Regulations and Best Practices.**

- Offshore safety management systems (SMS).
- Environmental regulations and compliance.
- Oil spill prevents and response.
- Risk assessment and hazard identification.
- Emergency response and crisis management.
- Decommissioning of offshore platforms.
- Human factors in offshore safety.

## **FAQ:**

### **Qualifications required for registering to this course?**

There are no requirements.

### **How long is each day session, and what is the total number of training hours for the course?**

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

### **Something to think about:**

Considering the unique environmental and logistical challenges of deep-water projects, how can the industry balance the pursuit of new offshore reserves with the imperative for sustainable and safe operations?

## **What unique qualities does this course offer compared to other courses?**

This training course is unique because it provides a comprehensive, start-to-finish overview of the entire offshore operations lifecycle. Unlike other programs that focus on a single aspect, we connect the dots from initial exploration and seismic analysis to final production, safety, and decommissioning. The curriculum is specifically designed to give participants a holistic understanding of how each stage influences the others, which is vital for effective project management and risk mitigation. Our approach incorporates real-world examples and case studies from major offshore projects around the globe, providing practical insights you won't find in a textbook. By delving into critical topics like subsea technology, well completions, and operational safety, we equip professionals with the knowledge needed to handle the multifaceted challenges of the offshore environment. This course is an investment in your career, which provides a deep understanding that transcends simple theory and delivers actionable, on-the-job expertise.