Strategic EPC Project Management and Execution Training Course

21 - 25 Dec 2026

Cape town

4600 € (Per Person)

Ref: #PRM7738_280428

Course Introduction / Overview:

Engineering, Procurement, and Construction (EPC) projects are among the most complex and high-stakes undertakings in the modern industrial landscape. Their success hinges on a delicate balance of technical expertise, strategic procurement, and flawless construction execution. This course provides a comprehensive, A-to-Z roadmap for navigating the entire EPC project lifecycle, from initial feasibility and front-end engineering design (FEED) to commissioning and final handover. We delve into the integrated nature of EPC management, moving beyond siloed approaches to foster a holistic understanding of how decisions in one phase critically impact others. As noted by project management expert Dr. Paul D. Giammalvo, true project success is achieved through the disciplined integration of scope, time, cost, and quality. This philosophy is at the core of our curriculum. BIG BEN Training Center has designed this program to equip participants with the advanced skills needed to manage risks, control costs, and lead multidisciplinary teams effectively. Participants will explore real-world challenges and best practices, learning to drive EPC projects to successful completion on time and within budget, ensuring they deliver lasting value and meet all stakeholder expectations in a competitive global market.

Target Audience / This training course is suitable for:

- Project Directors and Managers.
- Project Engineers and Lead Engineers.
- Procurement and Supply Chain Managers.
- Construction Managers and Supervisors.
- Contract Managers and Administrators.
- Project Control and Planning Professionals.
- Quality Assurance and Quality Control Managers.
- Client Representatives on EPC Projects.
- Professionals aspiring to senior roles in project management.

Target Sectors and Industries:

- Oil and Gas.
- Power Generation and Renewable Energy.
- Petrochemicals and Chemicals.
- Infrastructure and Civil Engineering.
- Mining and Metals.
- Pharmaceuticals and Manufacturing.
- Water Treatment and Utilities.
- Governmental bodies and public works agencies.

Target Organizations Departments:

- Project Management Office (PMO).
- Engineering and Design.
- Procurement and Contracts.
- Construction and Site Operations.
- Project Controls (Planning, Scheduling, Cost Control).
- Health, Safety, and Environment (HSE).
- Quality Assurance and Control (QA/QC).
- Business Development and Tendering.

Course Offerings:

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

- Develop a comprehensive EPC project execution plan.
- Analyze and manage the complexities of the EPC project lifecycle.
- Implement effective procurement and supply chain management strategies.
- Master project control techniques for cost, schedule, and quality.
- Identify, assess, and mitigate risks specific to EPC projects.
- Administer and manage complex EPC contracts and claims.
- Lead multidisciplinary teams for seamless project integration.
- Oversee the construction, commissioning, and handover phases effectively.
- Enhance stakeholder communication and management throughout the project.
- Apply best practices for successful EPC project closeout and evaluation.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply their learning to real-world scenarios. We move beyond traditional lectures to create an immersive learning environment. The course is built upon a foundation of expert-led instruction combined with a variety of dynamic learning tools. Central to our approach are in-depth case studies of major international EPC projects, allowing participants to analyze both successes and failures to draw critical lessons. Group discussions and collaborative workshops encourage the sharing of diverse experiences and perspectives, fostering a richer understanding of complex project challenges. Practical exercises, such as risk assessment simulations and contract negotiation role-playing, provide hands-on experience in a supportive setting. Participants will receive continuous feedback from the instructor and peers, helping to refine their skills and build confidence. This blended approach ensures a comprehensive mastery of EPC project management principles and practices.

Course Agenda (Course Units):

Unit One: Fundamentals of the EPC Project Lifecycle

- Introduction to the EPC Business Model.
- Key Phases of an EPC Project from Concept to Completion.
- Understanding the Roles of Owner, Contractor, and Subcontractors.
- Front-End Engineering Design (FEED) and its Critical Importance.
- Developing the Project Scope and Work Breakdown Structure (WBS).
- Stakeholder Identification and Analysis.
- The Legal and Commercial Framework of EPC Projects.

Unit Two: Mastering Engineering and Procurement Phases

- Managing the Detailed Engineering and Design Process.
- Value Engineering and Design Optimization Techniques.
- Developing a Strategic Procurement and Sourcing Plan.
- Supplier Prequalification, Tendering, and Bid Evaluation.
- Negotiating EPC Contracts and Key Commercial Terms.
- Global Sourcing and Logistics Management.
- Expediting and Quality Inspection of Procured Goods.

Unit Three: Excellence in Construction and Commissioning

- Construction Planning and Site Mobilization.
- Managing Site Logistics and Subcontractors.
- Implementing Health, Safety, and Environment (HSE) Management Systems.
- Quality Assurance and Quality Control in Construction.
- Mechanical Completion, Pre-commissioning, and Commissioning.
- Performance Testing and Acceptance Procedures.
- Managing the Handover Process to the Client.

Unit Four: Advanced Project Controls and Contract Management

- Integrated Project Planning and Scheduling Techniques.
- Cost Estimation, Budgeting, and Cost Control Systems.
- Earned Value Management (EVM) for Performance Measurement.
- Risk Identification, Qualitative, and Quantitative Analysis.
- Developing Risk Response and Mitigation Strategies.
- EPC Contract Administration and Management.
- Managing Variations, Claims, and Dispute Resolution.

Unit Five: Leadership, Stakeholder Engagement, and Project Closeout

- Leadership and Team Building in a Multidisciplinary EPC Environment.
- Effective Communication and Reporting Strategies.
- Managing Interfaces Between Engineering, Procurement, and Construction.
- Advanced Stakeholder Engagement and Management.
- Project Closeout Procedures and Final Documentation.
- Lessons Learned and Continuous Improvement Processes.
- Future Trends and Innovations in EPC Project Management.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily 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:

Beyond cost and schedule, how can the long-term operational success of an asset be embedded into the core decision-making processes of an EPC project's early phases?

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

This course distinguishes itself by adopting a truly integrated and strategic perspective on EPC project management, rather than focusing on isolated functions or software tools. While many programs may cover the individual components of engineering, procurement, and construction, our curriculum is meticulously designed to explore the critical interfaces and dependencies between them. We emphasize how decisions made during the FEED and engineering stages have profound and often irreversible impacts on procurement, construction, and long-term operability. The course content is enriched with practical insights drawn from a wide array of global case studies, examining complex projects in sectors from oil and gas to renewable energy. This provides participants with a nuanced understanding of real-world challenges and proven solutions. Furthermore, we place a strong emphasis on the non-technical aspects of project success, dedicating significant time to leadership, stakeholder management, and contract negotiation strategies. This holistic approach ensures that participants leave not just as managers of process, but as strategic leaders capable of navigating complexity and delivering exceptional project outcomes.