AMERICAN GLOBAL INSTITUTE
FOR PRIVATE TRAINING

External Training Course

Front-End Engineering Design (FEED) & Project Execution Alignment

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From 20 Oct. To 24 Oct. 2025
From 10 Nov. To 14 Nov. 2025
From 15 Dec. To 19 Dec. 2025

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Seoul, South Korea

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External Training Course:

Front-End Engineering Design (FEED) & Project Execution Alignment

From 20 Oct. To 24 Oct. 2025 **Fees: 1900 KD**
From 10 Nov. To 14 Nov. 2025 **Fees: 1900 KD**
From 15 Dec. To 19 Dec. 2025 **Fees: 1900 KD**

Course Overview

This advanced training course delivers an in-depth understanding of Front-End Engineering Design (FEED) and its vital connection with Project Execution. Participants will explore the best global practices for planning, designing, and managing FEED to ensure full alignment with downstream execution phases. The course provides practical strategies to achieve design maturity, minimize scope changes, reduce project cost overruns, and secure predictable outcomes. It integrates concepts from project management, engineering, procurement, and construction management to ensure effective transition from design to execution. Major Points:

- The strategic role of FEED in the project lifecycle.
- Key deliverables and decision gates in FEED.
- Bridging conceptual design and detailed engineering.
- Importance of FEED quality on execution performance.
- Integrating cost, schedule, and quality objectives early.
- Avoiding rework and scope creep through strong FEED planning.
- Ensuring readiness for EPC and construction handover.

Course Objectives

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

- Comprehend the function and scope of FEED in capital projects.
- Identify and define FEED deliverables and interface documents.
- Apply effective project controls during FEED.
- Link FEED results directly to execution readiness.
- Evaluate constructability, operability, and maintainability during design.
- Ensure cost, quality, and schedule integration throughout FEED.
- Implement design change and risk management processes.
- Enhance collaboration across engineering, procurement, and operations.
- Establish clear metrics and KPIs to assess FEED performance.
- Develop FEED governance structures and review mechanisms.

Target Audience

This course is ideal for:

- Project Managers, FEED Managers, and Engineering Managers.
- Process, Mechanical, Civil, Electrical & Instrumentation Engineers.
- Project Control, Cost Estimation & Scheduling Engineers.
- Construction, Commissioning & Execution Engineers.
- Procurement, Contracts & Quality Professionals.
- HSE Engineers and Risk Managers.
- Asset Owners, Consultants, and EPC Contractors.
- Project Planners and Interface Coordinators.
- Business Development and Technical Advisors in capital projects.

Training Methodology

The course utilizes a combination of practical learning tools and structured techniques, including:

- Comprehensive presentations with step-by-step FEED workflows.
- Group workshops and case discussions.
- Templates and checklists for FEED deliverables and reviews.
- Detailed exercises on scope definition, cost estimation, and contracting.
- Review of real-world FEED documents from major energy and infrastructure projects.
- Continuous group collaboration and instructor-led discussions.
- End-of-course group project and action plan development.

Organizational Impact

Organizations that implement these practices will gain:

- Better coordination between FEED and execution teams.
- Reduced cost growth and fewer change orders in execution.
- Improved constructability and procurement readiness.
- Enhanced quality and reliability of engineering deliverables.
- Shorter project cycle times and higher return on investment.
- Increased stakeholder confidence and project predictability.
- Stronger control over project interfaces and risks.
- Optimized decision-making during early design phases.

Personal Impact

Participants will gain:

- Strong understanding of FEED fundamentals and execution alignment.
- Enhanced technical and management capabilities.
- Greater confidence in leading FEED reviews and assessments.
- Ability to identify gaps between design intent and execution readiness.
- Improved communication across multidisciplinary project teams.
- Skills to manage interfaces, contractors, and technical risks.
- Recognition as a key contributor to project success and performance excellence.

Course Content & Outline

Day 1 – Fundamentals of FEED and Project Lifecycle Alignment

- Overview of project development phases: Concept, FEED, EPC, and Operations.
- FEED objectives, deliverables, and performance indicators.
- Integration of FEED with business case and project approval.
- Governance, decision gates, and FEED documentation requirements.
- FEED maturity models and readiness assessments.
- Stakeholders' roles and responsibilities in FEED planning.
- Challenges and typical gaps between FEED and execution phases.
- Case study: evaluating FEED effectiveness in complex projects.
- Practical workshop: mapping FEED deliverables to project lifecycle.

Day 2 – Scope Definition, Design Deliverables & Constructability

- Scope development and work breakdown structure (WBS) creation.
- Basis of Design (BoD), design criteria, and project data sheets.
- Preparation of key design documents (PFDs, P&IDs, layouts, 3D models).
- Defining battery limits, tie-ins, and interface points.
- Incorporating constructability and operability from day one.
- Design for maintenance, inspection, and safety in operations.
- Engineering assurance and verification reviews during FEED.
- Managing interface control documents (ICDs).
- Workshop: review of a FEED package for scope completeness and constructability.

Day 3 – Cost Estimation, Scheduling & Risk Management

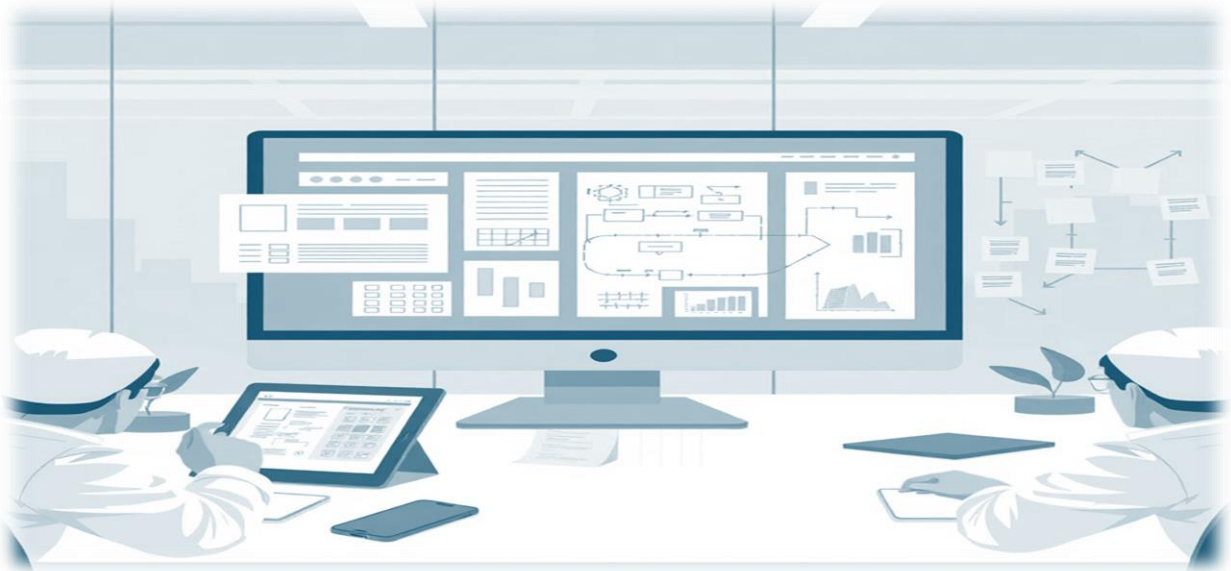
- FEED cost estimate classification and accuracy levels (AACE, FEL frameworks).
- Development of cost control baselines and budget approval strategies.
- Integration of cost, schedule, and scope during FEED.
- Schedule development aligned with engineering deliverables.
- Identification and assessment of major project risks.
- Establishing contingency and escalation strategies.
- Conducting cost and risk reviews before EPC tendering.
- Value engineering and design optimization during FEED.
- Workshop: creating a FEED cost–risk–schedule alignment chart.

Day 4 – Procurement, Contracting & Execution Readiness

- Defining contracting strategies during FEED (EPC, EPCM, Lump Sum, etc.).
- Vendor prequalification and data sheet development.
- Long-lead item identification and early procurement planning.
- Interface management between engineering and procurement.
- Quality assurance and HSE integration in FEED deliverables.
- Managing technical queries and document reviews.
- Readiness checklist for execution transition.
- Change management and FEED close-out procedures.
- Workshop: building a FEED procurement and contracting alignment plan.

Day 5 – Commissioning, Start-Up & Performance Alignment

- Ensuring design deliverables meet commissioning and operation's needs.
- Integrating pre-commissioning and start-up plans into FEED.
- Execution readiness audits and performance tracking.
- As-built documentation, project handover, and lessons learned.
- KPIs for FEED–Execution alignment and benchmarking performance.
- Continuous improvement across project phases.
- Building organizational FEED excellence frameworks.
- Workshop: developing a FEED–Execution Alignment Action Plan.
- Final course review and certification exercise.



Program Agenda:

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	Discussing Course Main Topics: • Fundamentals of FEED and Project Lifecycle Alignment. • Scope Definition, Design Deliverables & Constructability. • Cost Estimation, Scheduling & Risk Management. • Procurement, Contracting & Execution Readiness. • Commissioning, Start-Up & Performance Alignment.
11.30	12.00	Coffee Break
12.00	14.00	Fundamentals of FEED and Project Lifecycle Alignment: • Overview of project development phases: Concept, FEED, EPC, and Operations. • FEED objectives, deliverables, and performance indicators. • Integration of FEED with business case and project approval. • Governance, decision gates, and FEED documentation requirements. • FEED maturity models and readiness assessments. • Stakeholders' roles and responsibilities in FEED planning. • Challenges and typical gaps between FEED and execution phases. • Case study: evaluating FEED effectiveness in complex projects. • Practical workshop: mapping FEED deliverables to project lifecycle.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	Scope Definition, Design Deliverables & Constructability: • Scope development and work breakdown structure (WBS) creation. • Basis of Design (BoD), design criteria, and project data sheets. • Preparation of key design documents (PFDs, P&IDs, layouts, 3D models). • Defining battery limits, tie-ins, and interface points. • Incorporating constructability and operability from day one.
11.30	12.00	Coffee Break
12.00	14.00	Scope Definition, Design Deliverables & Constructability: • Design for maintenance, inspection, and safety in operations. • Engineering assurance and verification reviews during FEED. • Managing interface control documents (ICDs). • Workshop: review of a FEED package for scope completeness and constructability.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	Cost Estimation, Scheduling & Risk Management: • FEED cost estimate classification and accuracy levels (AACE, FEL frameworks). • Development of cost control baselines and budget approval strategies. • Integration of cost, schedule, and scope during FEED. • Schedule development aligned with engineering deliverables. • Identification and assessment of major project risks.
11.30	12.00	Coffee Break
12.00	14.00	Cost Estimation, Scheduling & Risk Management: • Establishing contingency and escalation strategies. • Conducting cost and risk reviews before EPC tendering. • Value engineering and design optimization during FEED. • Workshop: creating a FEED cost–risk–schedule alignment chart.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	Procurement, Contracting & Execution Readiness: • Defining contracting strategies during FEED (EPC, EPCM, Lump Sum, etc.). • Vendor prequalification and data sheet development. • Long-lead item identification and early procurement planning. • Interface management between engineering and procurement. • Quality assurance and HSE integration in FEED deliverables.
11.30	12.00	Coffee Break
12.00	14.00	Procurement, Contracting & Execution Readiness: • Managing technical queries and document reviews. • Readiness checklist for execution transition. • Change management and FEED close-out procedures. • Workshop: building a FEED procurement and contracting alignment plan.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	Commissioning, Start-Up & Performance Alignment: • Ensuring design deliverables meet commissioning and operation's needs. • Integrating pre-commissioning and start-up plans into FEED. • Execution readiness audits and performance tracking. • As-built documentation, project handover, and lessons learned. • KPIs for FEED–Execution alignment and benchmarking performance.
11.30	12.00	Coffee Break
12.00	14.00	Commissioning, Start-Up & Performance Alignment: • Continuous improvement across project phases. • Building organizational FEED excellence frameworks. • Workshop: developing a FEED–Execution Alignment Action Plan. • Final course review and certification exercise.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch