

COURSE OVERVIEW FM0217
Cost Engineering & Risk Management

Course Title

Cost Engineering and Risk Management

Course Date/Venue

October 19-23, 2025/Boardroom 1, Elite Byblos Hotel, Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference

FM0217

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies where participants will be engaged in a series of interactive small groups and class workshops.



This course is designed to provide participants with a detailed and up-to-date overview of Cost Engineering & Risk Management. It covers the importance of cost engineering in district cooling and the fundamentals of risk management; the project cost estimation, cost control and monitoring, risk identification and assessment; the project management tools, detailed cost estimates and cost components and breakdown; developing a project budget and techniques for budget allocation; the methods for estimating contingency and escalation costs; and the life cycle cost analysis, risk analysis and risk mitigation strategies.



During this interactive course, participants will learn the risk monitoring and control, risk management frameworks, scenario planning and analysis; integrating cost and risk management; the cost-risk analysis, project scheduling and techniques for managing schedule risks; the earned value management (EVM) and adjusting budgets based on risk analysis; the advanced estimation techniques, advanced risk management tools and predictive analytics in risk management; the techniques for optimizing costs in district cooling; the role of energy efficiency in cost management; incorporating sustainability into risk management and managing sustainability risks and ensuring compliance in cost and risk management practices.

Course Objectives

Upon the successful completion of the course, each participant will be able to:-

- Apply and gain an in-depth knowledge on cost engineering and risk management
- Discuss the importance of cost engineering in district cooling and the fundamentals of risk management
- Carryout project cost estimation, cost control and monitoring, risk identification and assessment
- Identify project management tools, develop detailed cost estimates and discuss cost components and breakdown
- Develop a project budget and techniques for budget allocation as well as apply methods for estimating contingency and escalation costs
- Illustrate life cycle cost analysis, risk analysis methods and risk mitigation strategies
- Apply risk monitoring and control, risk management frameworks, scenario planning and analysis
- Integrate cost and risk management and apply cost-risk analysis, project scheduling and techniques for managing schedule risks
- Carryout earned value management (EVM), use EVM for cost and risk management and adjust budgets based on risk analysis
- Explore advanced estimation techniques and use of AI and machine learning in cost estimation
- Recognize advanced risk management tools and use predictive analytics in risk management
- Apply techniques for optimizing costs in district cooling and discuss the role of energy efficiency in cost management
- Incorporate sustainability into risk management, manage sustainability risks and ensure compliance in cost and risk management practices

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of cost engineering and risk management for project managers, cost engineers/estimators, risk managers, financial analysts, engineers and technical staff, procurement specialists, contract managers, construction managers, senior management executives, consultants and advisors.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:-




The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Eric Horne, MBA, PMP, HNDPM, NDOWS, T3 (Mech), is a **Senior Project Manager & Finance Consultant** with over **35 years** of training and industrial experience. His expertise lies extensively in the areas of **Projects, Contracts, Operations, Procurement, Production, Finance and Supply Chain Management**. Further, Mr. Horne is an expert in Project Management Professional (**PMP**), **Project Risk Management Concepts, Communications Management; Interpersonal, Teamwork &**

Team Management; Advanced Consolidation & Financial Reporting, Financial Statements Review, International Financial Reporting Standards (IFRS), Revenue Recognition, Forecasting Evaluation, Financial & Accounting Management, Budget & Cost Control, Inventory Planning & Stock Control, Warehouse Store & Inventory Control, Inventory Management & Forecasting Techniques, Stock Control, Advanced Budgeting & Forecasting, Budgeting Best Practices, Budgetary Controls, Effective Purchasing Skills, Procurement Strategies, Logistics Operations & Supply Chain Management, Vendor Selection Process, Procurement & Purchasing Management, Contract & Risk Management, Managing Tenders & Specifications, Tendering & Bidding Evaluation, Supply Chain Management, Shipping & Distribution Management, Outsourcing Strategy, Incoterms, Bill of Lading Fundamentals, Export Documentation, Fleet Management, Safe Packing & Cargo Handling, Adaptability & Learning, Marketing Management; Customer Care Management; Sales & Marketing, Branding, Account Development Strategy & Time Management; Facilitation & Business Presentation Management; Warehouse & Logistics Management; Data & Record Management; Managerial Economics; Marketing Management; Value Engineering; Change Management; Planning, Budgeting & Cost Control; Strategic Thinking, Re-Engineering & Risk Management; Production Planning & Control; and Service Level Agreements (SLA). He is also well-versed in Business Law, Labour Law, Strategy Formulation, Resource Allocation, Continuous Improvement and Productivity Improvement. He is currently the **Senior Project Manager of APC Solutions wherein he is responsible for the complete project life cycle including **initiating, planning, executing, monitoring & controlling** and **closing** as well as developing and presenting of various trainings within their organization.**

Mr. Horne has worked for many blue chip companies such as **BHP Billiton, Eskom, Telecast Engineering, Adcorp, 3M** and many more wherein he gained technical and broad experience in all facets of well-renowned large companies in various industries. His work started on the shop floor as a Work Study Officer, **Industrial Engineer**, Senior Work Study Officer, **Lecturer, Project Engineer** and rising up to managerial positions like **Project Manager, Contracts Manager, Marketing Manager, Finance Manager, National Marketing & Training Manager, Change Manager, Regional Manager** and **Project & Training Manager**.

Mr. Horne has a **Master** degree in **Business Administration**, a **Higher National Diploma** in **Production Management** and a **National Diploma** in **Organisation & Work Study**. Further, he is a **Certified Instructor/Trainer**, a **Certified T3 in Mechanical Engineering**, a **Certified PMI Risk Management Professional (PMI-RMP)**, a **Certified Project Manager Professional (PMP)**, a **Qualified Assessor** at **SETA** and a **Certified Trainer/Assessor** by the **Institute of Leadership & Management (ILM)**. He has further delivered numerous trainings, courses, workshops and conferences worldwide.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 19th of October 2025

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Overview of Cost Engineering <i>Definition and Importance in District Cooling • Key Principles and Objectives</i>
0930 – 0945	<i>Break</i>
0945 – 1045	Fundamentals of Risk Management <i>Definition and Importance • Key Principles and Objectives</i>
1045 – 1130	Project Cost Estimation <i>Types of Cost Estimates (Preliminary, Detailed) • Techniques for Accurate Cost Estimation</i>
1130 – 1230	Cost Control & Monitoring <i>Importance of Cost Control • Techniques for Monitoring and Controlling Costs</i>
1230 – 1245	<i>Break</i>
1245 – 1330	Risk Identification & Assessment <i>Identifying Risks in District Cooling Projects • Techniques for Risk Assessment</i>
1330 – 1420	Project Management Tools <i>Overview of Common Tools (e.g., MS Project, Primavera) • Importance of Integrated Project Management Systems</i>
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2: Monday, 20th of October 2025

0730 – 0830	Developing Detailed Cost Estimates Steps for Creating Detailed Estimates • Case Study: Detailed Cost Estimation for a District Cooling Project
0830 – 0930	Cost Components & Breakdown Direct and Indirect Costs • Understanding Cost Breakdown Structures (CBS)
0930 – 0945	Break
0945 – 1100	Budget Development Creating a Project Budget • Techniques for Budget Allocation
1100 – 1230	Estimating Contingency & Escalation Importance of Contingency Planning • Methods for Estimating Contingency and Escalation Costs
1230 – 1245	Break
1245 – 1330	Life Cycle Cost Analysis Understanding Life Cycle Costs • Techniques for Life Cycle Cost Analysis
1330 – 1420	Cost Estimation Software Introduction to Estimation Software Tools • Hands-On Training with Estimation Software
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Tuesday, 21st of October 2025

0730 – 0830	Risk Analysis Methods Qualitative vs. Quantitative Risk Analysis • Tools and Techniques for Risk Analysis
0830 – 0930	Risk Mitigation Strategies Developing Risk Mitigation Plans • Techniques for Implementing Risk Mitigation
0930 – 0945	Break
0945 – 1100	Risk Monitoring & Control Importance of Continuous Risk Monitoring • Tools for Risk Control and Reporting
1100 – 1230	Risk Management Frameworks Introduction to Popular Frameworks (e.g., ISO 31000) • Adapting Frameworks to District Cooling Projects
1230 – 1245	Break
1245 – 1330	Scenario Planning & Analysis Developing and Analyzing Risk Scenarios • Techniques for Scenario Planning
1330 – 1420	Case Studies in Risk Management Real-World Examples of Risk Management in District Cooling • Lessons Learned and Best Practices
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 22nd of October 2025

0730 – 0830	Integrating Cost & Risk Management <i>Importance of Integration • Techniques for Integrated Management</i>
0830 - 0930	Cost-Risk Analysis <i>Understanding the Relationship Between Cost and Risk • Methods for Cost-Risk Analysis</i>
0930 – 0945	Break
0945 – 1100	Project Scheduling & Risk <i>Impact of Risk on Project Schedules • Techniques for Managing Schedule Risks</i>
1100 – 1230	Earned Value Management (EVM) <i>Introduction to EVM Concepts • Using EVM for Cost and Risk Management</i>
1230 – 1245	Break
1245 – 1330	Developing a Risk-Adjusted Budget <i>Creating Budgets that Account for Risk • Techniques for Adjusting Budgets Based on Risk Analysis</i>
1330 – 1420	Workshop: Integrated Cost & Risk Management Plan <i>Group Activity to Develop an Integrated Plan • Presentations and Discussions</i>
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5: Thursday, 23rd of October 2025

0730 – 0830	Advanced Techniques in Cost Engineering <i>Exploring Advanced Estimation Techniques • Use of AI and Machine Learning in Cost Estimation</i>
0830 – 0930	Advanced Risk Management Tools <i>Exploring Advanced Risk Management Tools • Use of Predictive Analytics in Risk Management</i>
0930 – 0945	Break
0945 – 1100	Energy Efficiency & Cost Optimization <i>Techniques for Optimizing Costs in District Cooling • Role of Energy Efficiency in Cost Management</i>
1100 – 1230	Sustainability & Risk Management <i>Incorporating Sustainability into Risk Management • Techniques for Managing Sustainability Risks</i>
1230 – 1245	Break
1245 – 1345	Regulatory Compliance & Industry Standards <i>Understanding Relevant Standards and Regulations • Ensuring Compliance in Cost and Risk Management Practices</i>
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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