

COURSE OVERVIEW PM0673 Project Economic Analysis

Course Title **Project Economic Analysis**

Course Date

October 26-30, 2025/Dubai Meeting Room, The Tower Plaza Hotel, Dubai, UAE

O CEUS

Course Reference PM0673

(30 PDHs) Course Duration/Credits AWAR Five days/3.0 CEUs/30 PDHs

Course Description









This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Project Economic Analysis. It covers the purpose and importance of project economic analysis for facility planning and investment decisions; the types of project evaluations and basic financial mathematics, cash flow estimation and project life cycle and cost breakdown; the net present value (NPV), internal rate of return (IRR) and benefit-cost ratio (BCR); the payback period and break-even analysis, sensitivity and scenario analysis and dealing with risk and uncertainty; and the structure of decision trees, calculating expected monetary value (EMV) and using probabilities in outcomes.

During this interactive course, participants will learn the impact of inflation and escalation and financing and capital structure impacts; the public versus private sector project evaluation. real estate and infrastructure project economics and rehabilitation versus new facility projects; the operations and maintenance of cost analysis and sustainability and green investment evaluation; linking strategic goals to evaluation criteria; aligning technical, economic stakeholder needs: documenting and assumptions and limitations and the role of multidisciplinary inputs; the criteria weighting and scoring, using qualitative and quantitative inputs, application for complex facility projects and decision matrix tools; and the economic feasibility report preparation, communicating economic justifications and post-evaluation and project monitoring.



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Course Objectives

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

- Apply and gain an in-depth knowledge on project economic analysis
- Discuss the purpose of project economic analysis and the importance for facility planning and investment decisions
- Identify various types of project evaluations and basic financial mathematics as well as cash flow estimation and project life cycle and cost breakdown
- Recognize net present value (NPV), internal rate of return (IRR) and benefit-cost ratio (BCR)
- Apply payback period and break-even analysis and sensitivity and scenario analysis and deal with risk and uncertainty
- Describe the structure of decision trees, calculate expected monetary value (EMV) and use probabilities in outcomes
- Discuss the impact of inflation and escalation and financing and capital structure impacts
- Differentiate public versus private sector project evaluation, real estate and infrastructure project economics and rehabilitation versus new facility projects
- Employ operations and maintenance cost analysis and sustainability and green investment evaluation
- Link strategic goals to evaluation criteria, align technical, economic and stakeholder needs, document assumptions and limitations and identify the role of multi-disciplinary inputs
- Carryout criteria weighting and scoring, using qualitative and quantitative inputs, application for complex facility projects and decision matrix tools
- Apply economic feasibility report preparation, communicating economic justifications and post-evaluation and project monitoring

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 project economic analysis for project managers, economists and financial analysts, government officials and policy makers, development and NGO professionals, investors and business executives, engineers and other technical staff.

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.



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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: -



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.

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.

Accommodation

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



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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. Mike Taylor, PhD (on-going), MScLI, MBA, MBL, BSc, HDE, is a Senior Project & Finance Management Consultant with over 25 years of experience in Power & Water Utilities, Other Energy Sectors and Financial industries. His expertise lies extensively in the areas of Project Quality Management, Quality Control & Site Inspection, Project Quality Plan, Construction Quality Management, Material Management & Project Turnover, Project Risk Management, Risk Identification Tools & Techniques, Project Life Cycle, Project Stakeholder & Governance, Project Management Processes, Project

Integration Management, Project Management Plan, Project Work Monitoring & Control, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Project Human Management, Quality Assurance, Resource Management, Project Communications Management, Project Planning, Scheduling & Cost Control Professional, Project Scheduling & Cost Control, Facilitation & Leadership Skills, Coaching, Human Resource Development, Psychometric Testing, Career Development & Competence, Succession Planning, Self-Development & Empowerment, Personal Learning Needs Identification, Data Quality Control, Data Quality Assessment, Data Quality Planning, Data Quality Strategy Management, Customer Management, Leadership Skills, Presentation Skills, Negotiation Skills, Decision Making Skills, Communication Skills, Emotional Intelligence, Performance Management, Contract Management, Quality Management, Commercial Strategy, Project Management, Risk Management, Leadership & Business Management, Human Resource Management, Planning, Budgeting & Cost Control, Business Development, Innovation, Sales Strategy and Knowledge & Intangible Asset Assessment Design. Further, he is also well versed in Project Financial Data, Financial Indicators, Financial Leverage, Discounted Cash Flows, Economic Cost Analysis, Equity Profitability Analysis, Financial Modelling & Forecasting, Financial Analysis Techniques, Financial Data Analysis Concepts & Process, Credit Analysis, Financial & Accounting Management, Financial Planning Techniques, Vendor Invoice Processing & Management, Evaluating Cost & Revenue, Budgeting & Cost Control and Marketing Management. Mr. Taylor is the Founder & CEO of Mitakon Innovation Pty Ltd wherein he is responsible for the development of Executives & Senior Managers specializing in innovation, knowledge management and commercial negotiation as well as authored, implemented and executed a global 21st century facilitation and leadership methodology.

During his career life, Mr. Taylor has gained his practical and field experience through his various significant positions and dedication as the Knowledge-Solutions Service Provider, Founder-Principal/CIO, Subject Matter Expert, Consulting Partner, Executive/Management Development Facilitator, Multinational/Corporate Senior Management Consultant, Senior Quality & Finance Consultant, Executive Management Development/Facilitator, Management Business Consultant/Facilitator, Business & Quality Consultant/Coach, Client Director, Administration Manager, Quality Manager, International Sales & Business Development Executive, Regional Sales Manager, National Key Accounts Manager, Commercial Sales & Marketing Consultant, Admin Assistant, Sales & Marketing Representative, Key Note Speaker, Lecturer and Instructor/Trainer for various international companies such as the Highland Group (Business Consulting), Anglo American, BHP Billiton, Rio Tinto, DI Management Solutions (BPO), Master Deal Making Institute (MDMI), RMG/Contact Media & Communications, Paul Dinsdale Properties (PDP), Giant Leap Architects, Wise Capital Investments (HOD), Evolution® Advertising, Collaborative Xchange, Leatt Corporation, Dentsply SA, FMCG/Binzagr Company, Unilever, Kellogg's, BAT, Hershey's, CORO, Lilly Direct/Lennon Generics and Bausch & Lomb.

Mr. Taylor has Master's degree in Leadership & Innovation, Business Administration and Business Leadership as well as a Bachelor degree in Physical Education and pursuing PhD in Global Governance & Energy Policy. Further, he is a Certified Instructor/Trainer, Certified Internal Verifier/Trainer/Assessor by the Institute of Leadership & Management (ILM) and a member of Incremental Advantage, Da Vinci Institute, Black Management Forum, Institute of Directors (IOD), World Future Society (WFS), Social Science Research Network, University of Kwazulu Natal (Alumnus), Anthropology & Archaeology Research Network and National Research Foundation (NRF). He has further delivered numerous trainings, courses, workshops, seminars and conferences globally.



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Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-ofthe-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 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, 26 th of October 2025
0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
0830 – 0900	<i>Overview of Economic Analysis in Facilities Planning</i> Definition & Purpose of Project Economic Analysis • Importance for Facility Planning & Investment Decisions • Economic versus Financial Analysis • Key Performance Indicators (NPV, IRR, ROI, Etc.)
0900 – 0930	Types of Project EvaluationsPreliminary Feasibility versus Detailed Economic Evaluation • Technical,Financial, & Economic Perspectives • Qualitative versus QuantitativeAssessment • Screening, Ranking, & Selection of Alternatives
0930 - 0945	Break
0945 – 1100	Basic Financial Mathematics Time Value of Money Concept • Present Value (PV) & Future Value (FV) Formulas • Annuities & Perpetuities • Discounting & Compounding Techniques
1100 – 1230	<i>Cash Flow Estimation</i> <i>Identifying Inflows & Outflows • Capital versus Operational Expenditures •</i> <i>Working Capital & Salvage Value • Net Cash Flow Calculation</i>
1230 – 1245	Break
1245 - 1330	<i>Project Life Cycle & Cost Breakdown</i> <i>Phases: Concept, Design, Construction, Operation, Disposal</i> • <i>Life-Cycle</i> <i>Cost (LCC) Analysis</i> • <i>Cost Classification (Fixed, Variable, Sunk)</i> • <i>Cost</i> <i>Estimation Techniques (Top-Down, Bottom-Up)</i>
1330 - 1420	Workshop: Setting Up a Cash Flow Model Create a Simple Project Cash Flow Table • Identify Capital & Operational Components • Apply Time Value of Money • Calculate Net Cash Flows
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow Lunch & End of Day One
1400	



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Day 2:	Monday, 27 th of October 2025
	Net Present Value (NPV)
0730 - 0830	NPV Formula & Interpretation • Choosing the Right Discount Rate • NPV
	Decision Rule • Strengths & Limitations
	Internal Rate of Return (IRR)
0830 - 0930	IRR Definition & Calculation • Multiple IRRs & Non-Conventional Cash
	Flows • Modified IRR (MIRR) • IRR versus NPV Comparison
0930 - 0945	Break
	Benefit-Cost Ratio (BCR)
0945 - 1100	Ratio Interpretation & Thresholds • Application in Public Sector Projects •
	Limitations & Common Mistakes • BCR versus NPV Usage Scenarios
	Payback Period & Break-Even Analysis
1100 - 1230	Simple versus Discounted Payback • Time to Recover Investment • Break-
	Even Point Calculation • Strategic Importance of Quick Returns
1230 - 1245	Break
	Sensitivity & Scenario Analysis
1245 1330	Identifying Key Variables (Cost, Revenue, Inflation) • Conducting One-
1245 - 1550	<i>Variable Sensitivity Tests</i> • <i>Best Case, Base Case, Worst Case</i> • <i>Visualization</i>
	Tools (Tornado Charts)
	Workshop: Economic Indicator Comparison
1220 1420	Analyze a Project Using NPV, IRR, & Payback • Adjust Assumptions & Re-
1550 - 1420	<i>Run the Model</i> • <i>Plot & Interpret Results</i> • <i>Group Discussion on Evaluation</i>
	Outcome
	Recap
1420 – 1430	Using this Course Overview, the Instructor(s) will Brief Participants about
	the Topics that were Discussed Today and Advise Them of the Topics to be
	Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3:	Tuesday, 28 th of October 2025
0730 - 0830	Dealing with Risk & UncertaintyDefinition & Difference Between Risk & Uncertainty • Sources ofUncertainty in Facility Projects • Probabilistic versus Deterministic Models• Risk-Adjusted Discount Rates
0830 - 0930	Decision Trees & Expected Value Structure of Decision Trees • Calculating Expected Monetary Value (EMV) • Using Probabilities in Outcomes • Application to Phased Project Decisions
0930 - 0945	Break
0945 – 1100	Monte Carlo Simulation BasicsPurpose & Concept of Simulation • Commonly Used Distributions (Normal, Triangular) • Input Variability & Output Range • Tools & Platforms (e.g., Excel @RISK)
1100 - 1230	Impact of Inflation & EscalationNominal versus Real Cash Flows • Adjusting for General & Specific Inflation• Use of Escalation Indices • Currency Exchange Rate Implications
1230 - 1245	Break



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1245 - 1330	Financing & Capital Structure Impacts
	Equity versus Debt Financing • Cost of Capital & WACC • Impact of
	<i>Financing on Cash Flow & IRR • Tax Shields & Loan Repayment Schedules</i>
1330 - 1420	Workshop: Sensitivity & Risk Application
	Apply Sensitivity Analysis to Cost Assumptions • Use a Decision Tree for
	Project Selection • Adjust Cash Flow for Inflation Impacts • Present Updated
	NPV & Risk Outlook
1420 - 1430	Recap
	Using this Course Overview, the Instructor(s) will Brief Participants about
	the Topics that were Discussed Today and Advise Them of the Topics to be
	Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4:	Wednesday, 29 th of October 2025
0730 - 0830	Public versus Private Sector Project Evaluation
	Differences in Evaluation Criteria • Social Cost-Benefit Analysis (SCBA) •
	Economic Impact on Stakeholders • Non-Monetary Benefits (E.G.,
	Environmental)
	Real Estate & Infrastructure Project Economics
0830 - 0930	Rental versus Ownership Models • Build-Operate-Transfer (BOT) & PPP
0000 0000	Structures • Long-Term Lease versus Capital Investment • Asset
	Depreciation & Maintenance
0930 - 0945	Break
	Rehabilitation versus New Facility Projects
0945 - 1100	Comparing Retrofit versus New Construction • Evaluating Existing Asset
0010 1100	Performance • Environmental & Operational Factors • Reuse, Salvage, &
	Cost Avoidance Analysis
	Operations & Maintenance Cost Analysis
1100 – 1230	Lifecycle Costing of Facilities • Preventive versus Corrective Maintenance
	<i>Economics</i> • Asset Reliability & Replacement Cost Planning • Facility Utility
1020 1045	Cost Modelling
1230 - 1243	Dreuk
	Sustainability & Green moestment Evaluation
1245 – 1330	Croom Building Cortifications & Value Impact • Incenting & Tax Ponofite
	for Sustainable Design
	Workshon: Facility Project Commarison
	Compare Two Facility Investment Scenarios • Include O&M Risk & Social
1330 – 1420	Impact • Score Using Multi-Criteria Decision Analysis (MCDA) •
	Recommend Best-Value Ontion
	Recap
1.100 1.100	Using this Course Overview, the Instructor(s) will Brief Participants about
1420 – 1430	the Topics that were Discussed Today and Advise Them of the Topics to be
	Discussed Tomorrow
1430	Lunch & End of Day Four



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Day 5:	Thursday, 30 th of October 2025
	Integrated Economic Evaluation Framework
0730 0830	Linking Strategic Goals to Evaluation Criteria • Aligning Technical,
0750 - 0850	<i>Economic, & Stakeholder Needs</i> • <i>Documenting Assumptions & Limitations</i>
	Role of Multi-Disciplinary Inputs
	Multi-Criteria Decision Analysis (MCDA)
0830 0030	<i>Criteria Weighting & Scoring • Using Qualitative & Quantitative Inputs •</i>
0030 - 0930	Application for Complex Facility Projects • Decision Matrix Tools (AHP,
	SAW)
0930 - 0945	Break
	Economic Feasibility Report Preparation
0045 1030	Structure of a Comprehensive Feasibility Report • Presenting Assumptions
0945 - 1050	& Indicators Clearly • Visual Aids: Graphs, Charts, & Dashboards •
	Tailoring Reports for Different Audiences
	Communicating Economic Justifications
1030 - 1130	Storytelling with Data • Using KPIs to Influence Stakeholders • Addressing
	<i>Objections & Sensitivities • Presenting Recommendations Confidently</i>
	Post-Evaluation & Project Monitoring
1130 - 1230	Setting Up KPIs for Tracking Actual Performance • Comparing Actual
1150 - 1250	versus Projected Outcomes • Capturing Lessons Learned for Future Projects
	Updating Economic Models with Real Data
1230 - 1245	Break
	Capstone Workshop: Final Project Evaluation
1245 - 1345	<i>Evaluate a Sample Facility Investment Case • Apply Full Economic Analysis</i>
1240 - 1040	(NPV, IRR, Risk) • Prepare a Recommendation Report • Group Presentations
	& Peer Review
	Course Conclusion
1345 – 1400	Using this Course Overview, the Instructor(s) will Brief Participants about
	the Course Topics that were Covered During the Course
1400 - 1415	POST-TEST
1415 - 1430	Presentation of Course Certificates
1430	Lunch & End of Course



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Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "MS Project", "Mindview Software" and "Raidlog Simulator".







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Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org



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