



COURSE OVERVIEW SE0511

Quantity Surveying Building Estimation

Course Title

Quantity Surveying Building Estimation

Course Date/Venue

September 21-25, 2025/TBA Meeting Room,
Elite Byblos Hotel Al Barsha, Sheikh Zayed
Road, Dubai, UAE

Course Reference

SE0511

Course Duration/Credits

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 Quantity Surveying Building Estimation. It covers the role and responsibilities of a quantity surveyor; the importance in construction projects and types of quantity surveying practices; the construction process, principles of measurement and units and estimation basics; the building materials, cost control and budgeting, site preparation and earthworks estimation; the concrete works measurement, brickwork and blockwork; and the roofing and finishing works.



Further, the course will also discuss the steel and metal works, doors and windows estimation; the mechanical, electrical and plumbing (MEP) quantities; the external works and landscaping estimation; the rates analysis, unit rates and preparing bill of quantities (BoQ); the tender documentation and processes, prequalification and selection criteria; the procurement methods and evaluating contractor proposals; the contract types and implications for estimating and the variations and change orders, interim valuations and payments.





During this interactive course, participants will learn the cost reporting, variance analysis techniques, forecasting final costs; the risk analysis techniques and mitigation strategies, alternatives and cost savings; the impact on quality and functionality and components of life cycle costs; and estimating maintenance and operating costs and finalizing document formatting.

Course Objectives

- Upon the successful completion of this course, each participant will be able to:-
- Apply and gain an in-depth knowledge on quantity surveying building estimation
- Discuss the role and responsibilities of a quantity surveyor, importance in construction projects and types of quantity surveying practices
- Illustrate construction process, principles of measurement and units and estimation basics
- Classify building materials and apply cost control and budgeting, site preparation and earthworks estimation
- Estimate concrete works measurement, brickwork and blockwork, roofing works, finishing works and steel and metal works
- Carryout doors and windows estimation and identify mechanical, electrical and plumbing (MEP) quantities
- Apply external works & landscaping estimation, rates analysis and unit rates and preparing bill of quantities (BoQ)
- Employ tender documentation and processes, prequalification and selection criteria, procurement methods and evaluating contractor proposals
- Recognize contract types and implications for estimating, variations and change orders as well as interim valuations and payments
- Apply cost report, variance analysis techniques, forecasting final costs, risk analysis techniques and mitigation strategies
- Identify alternatives and cost savings and the impact on quality and functionality
- Recognize the components of life cycle costs, estimate maintenance and operating costs and finalize document formatting

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 quantity surveying building estimation for civil engineers and construction professionals, quantity surveyors and estimators, site engineers and project managers, cost engineers and planning engineers, architects and design professionals, procurement and contract management staff and fresh graduates in civil or construction engineering.



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. Steve Magalios, CEng, PGDip (on-going), MSc, BSc, is a **Senior Civil Engineer** with almost **40 years** of extensive **On-shore & Offshore** experience in the **Oil & Gas, Construction, Refinery** and **Petrochemical** industries. His expertise widely covers in the areas of **Blast Simulation, Blast Resistant & Resilient Design, Building Life Assessment & Retrofit Solutions for Blast Resistance, Seismicity Modelling, Seismic Design** for Buildings, Advanced **Seismic & Wind Design of Reinforced Concrete**, Industrial Building Design, **Blast Resistance & Resilient** for Oil & Gas Field, **Concrete Structures & Building Rehabilitation, Reinforced Concrete Structures Protection, Concrete**

Structure Inspection & Repair, Concrete Inspection & Maintenance, Concrete Maintenance & Reliability Analysis, Design and Behaviour of Steel Structures, Advanced Steel Design & Stability of Structures Concrete Structural Design, Dynamic Analysis of Rotating Equipment Foundations & Structural Steel Piperacks, Concrete Technology, Construction Planning, Construction & Concrete Works Maintenance, Advanced Building Construction Technology, Geosynthetics & Ground Improvement Methods, Bench Design, Benching, Land Survey and ArcGIS for Earthworks & Management, ArcGIS for Surveying, Computer Aided Design (CAD), AutoCAD Civil 3D, GIS & Mapping, Structural Analysis & Design (STAAD PRO), Land Surveying & Property Evaluation, Earth Measurements, Earthwork & Structural Maintenance, System Safety Program Plan (SSPP) Inspection, Building & Road Design Skills, Civil Engineering Design, Structural Reliability Engineering, Road Construction & Maintenance, Road Pavement Design, Road Maintenance, Drainage System Operations & Maintenance, Blueprint Reading & Interpretation, Blue Print Documentation, Mechanical Drawings, P&ID, Flow Diagram Symbols, Cartographic Representation, Soil Classification, Cadastral Surveying & Boundary Definition, Project Engineering & Design, Construction Management, Project Planning & Execution, Site Management, Site Supervision, Effective Resource Management, Project Evaluation, FEED Management, EPC Projects Design, Project Completion & Workover, Quality Control and Team Management. He is also well-versed in Pipeline Operation & Maintenance, Pipeline Design & Construction, Pipeline Engineering, Scraper Traps, Burn Pits, Risk Assessment, HSE Plan & Procedures, Construction Planning, Methods & Management, Sloping, Embankments, Construction Planning, Construction Quality Management, Project Risk Assessment, Project Quality Plans, Excavation, Backfill & Compaction, Excavation & Reinstatement, Excavation Safety for Construction, Groundworks Supervision, Construction Quality Remote Sensing, Construction Materials, Construction Surveying, Detailed Engineering Drawings, Codes & Standards Quality Plan & Procedures, Safety & Compliance Management, Permit-to-Work Issuer, ASME, API, ANSI, ASTM, BS, NACE, ARAMCO & KOC Standards, MS Office tools, AutoCAD, STAAD-PRO, GIS, ArcInfo, ArcView, Autodesk Map and various programming languages and software such as SHOTPlus, FORTRAN, BASIC and AUTOLISP. Currently, he is the **Chartered Professional Surveyor Engineer & Urban-Regional Planner wherein he is deeply involved in providing exact data, measurements and determining properly boundaries. He is also responsible in preparing and maintaining sketches, maps, reports and legal description of surveys.**

During his career, Mr. Magalios has gained his expertise and thorough practical experience through challenging positions such as a **Project Site Construction Manager, Construction Site Manager, Project Manager, Deputy PMS Manager, Head of the Public Project Inspection Field Team, Technical Consultant, Senior Consultant, Consultant/Lecturer, Construction Team Leader, Lead Pipeline Engineer, Project Construction Lead Supervising Engineer, Civil Engineer, Lead Site Engineer, Senior Site Engineer Lead Engineer, Senior Site Engineer, R.O.W. Coordinator, Site Representative, Supervision Head and Contractor** for international Companies such as the Penspen International Limited, Eptista Servicios de Ingenieria S.I., J/V ILF Pantec TH. Papaioannou & Co. – Emenergy Engineering, J/V Karaylannis S.A. – Intracom Constructions S.A., Ergaz Ltd., Alkyonis 7, Palaeo Faliro, Piraeus, Elpet Valkaniki S.A., Asprofos S.A., J/V Depa S.A. just to name a few.

Mr. Magalios is a **Registered Chartered Engineer** and has a **Master's** and **Bachelor's** degree in **Surveying Engineering** from the **University of New Brunswick, Canada** and the **National Technical University of Athens, Greece**, respectively. Further, he is currently enrolled for **Post-graduate** in **Quality Assurance** from the **Hellenic Open University, Greece**. He has further obtained a Level 4B Certificates in Project Management from the National & Kapodistrian University of Athens, Greece and Environmental Auditing from the Environmental Auditors Registration Association (EARA). Moreover, he is a **Certified Instructor/Trainer**, a **Chartered Engineer** of Technical Chamber of Greece and has delivered numerous trainings, workshops, seminars, courses and conferences internationally.



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

Haward's 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**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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.



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.

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 Program

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

Day 1: Sunday, 21st of September 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Quantity Surveying Definition, Role & Responsibilities of a Quantity Surveyor • Importance in Construction Projects • Types of Quantity Surveying Practices • Interface with Other Disciplines
0930 – 0945	Break
0945 – 1030	Construction Process Overview Project Lifecycle Stages • Key Stakeholders in Construction • Documentation in Construction Projects • The Role of Contract Administration
1030 – 1130	Principles of Measurement & Units Units of Measurement (SI Units) • Standard Methods of Measurement (SMM) • Measurement Rules for Building Works • Introduction to Bills of Quantities (BoQ)
1130 – 1215	Estimation Basics Purpose & Types of Estimates • Sources of Data for Estimation • Factors Affecting Estimation Accuracy • Preliminary Cost Estimation Techniques
1215 – 1230	Break



1230 – 1330	Building Materials Classification of Building Materials • Material Properties Impacting Cost • Sourcing & Supply Chain Considerations • Sustainable Material Considerations
1330 – 1420	Cost Control & Budgeting Budget Development Principles • Importance of Cost Control in Projects • Tools & Techniques for Budgeting • Early Warning Indicators of Overruns
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 One

Day 2: Monday, 22nd of September 2025

0730 – 0830	Site Preparation & Earthworks Estimation Measurement of Site Clearance • Excavation & Backfilling Calculations • Disposal of Surplus Material • Earthwork Equipment Productivity Rates
0830 – 0930	Concrete Works Measurement & Estimation Foundation & Footing Quantities • Columns, Beams & Slabs Quantification • Formwork Estimation Techniques • Reinforcement Quantification Methods
0930 – 0945	Break
0945 – 1100	Brickwork & Blockwork Estimation Measurement Rules for Masonry Walls • Material Quantity Calculations • Mortar Volume Estimation • Wastage Factors in Masonry Works
1100 – 1215	Roofing Works Estimation Types of Roof Structures • Measurement of Roof Covering Materials • Timber Quantity Estimation • Accessories & Fixings Estimation
1215 – 1230	Break
1230 – 1330	Finishing Works Estimation Plastering & Rendering Quantities • Floor Finishes (Tiles, Screeds, etc.) • Painting & Decoration Quantities • Ceiling Works Measurement
1330 – 1420	Steel & Metal Works Estimation Structural Steel Quantity Takeoff • Fabrication & Erection Costs • Measurement for Handrails & Gratings • Steel Reinforcement Estimation Recap
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 Two

Day 3: Tuesday, 23rd of September 2025

0730 – 0830	Doors & Windows Estimation Measurement of Joinery Items • Types of Doors & Windows • Hardware Quantification • Glazing Works Estimation
0830 – 0930	Mechanical, Electrical & Plumbing (MEP) Quantities Plumbing & Sanitary Fixtures • HVAC Quantities • Electrical Wiring & Fittings • Measurement of MEP in BoQ
0930 – 0945	Break
0945 – 1100	External Works & Landscaping Estimation Pavements & Walkways Measurement • Drainage & Utilities Quantification • Fencing & Gates Estimation • Soft Landscaping Quantities



1100 – 1215	Rates Analysis & Unit Rates <i>Principles of Rate Analysis • Labor, Material & Plant Components • Establishing Unit Rates • Application of Unit Rates in Estimating</i>
1215 – 1230	<i>Break</i>
1230 – 1330	Preparing Bill of Quantities (BoQ) <i>Structure & Format of BoQ • Preamble & Description Writing • Itemization Techniques • Coding & Cross-Referencing</i>
1330 – 1420	Estimation Software Applications <i>Introduction to Estimation Software • Features of Common QS Software • Data Entry & Report Generation • Benefits of Digital Estimation Tools</i>
1420 – 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Three</i>

Day 4: Wednesday, 24th of September 2025

0730 – 0830	Tendering & Procurement Procedures <i>Tender Documentation & Processes • Prequalification & Selection Criteria • Types of Procurement Methods • Evaluating Contractor Proposals</i>
0830 – 0930	Contract Types & Implications for Estimating <i>Lump Sum Contracts • Measurement Contracts • Cost-Plus Contracts • Design & Build Contracts</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Variations & Change Orders <i>Definition & Types of Variations • Estimating the Cost Impact of Changes • Recording & Valuing Variations • Approval & Documentation Processes</i>
1100 – 1215	Interim Valuations & Payments <i>Progress Payment Certification • Measurement for Valuation Purposes • Retention & Deductions • Cash Flow Implications</i>
1215 – 1230	<i>Break</i>
1230 – 1330	Cost Reporting & Monitoring <i>Cost Reports & Dashboards • Variance Analysis Techniques • Forecasting Final Costs • Integration with Project Schedules</i>
1330 – 1420	Risk Management in Estimating <i>Identifying Estimation Risks • Allowances & Contingencies • Risk Analysis Techniques • Mitigation Strategies</i>
1420 – 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Four</i>

Day 5: Friday, 25th of September 2025

0730 – 0830	Detailed Takeoff Exercise (Case Study) <i>Review of Drawings & Specifications • Group Exercise on Quantity Takeoff • Measurement Techniques Application • Documentation of Results</i>
0830 – 0930	Preparation of Cost Estimate (Workshop) <i>Develop a Detailed Estimate • Apply Unit Rates & Pricing • Consideration of Project Constraints • Peer Review & Discussion</i>
0930 – 0945	<i>Break</i>



0945 – 1100	Value Engineering Principles Concepts & Benefits of Value Engineering • Identifying Alternatives & Cost Savings • Impact on Quality & Functionality • QS Role in Value Engineering Workshops
1100 – 1215	Life Cycle Costing Definition & Importance • Components of Life Cycle Costs • Estimating Maintenance & Operating Costs • Sustainability Considerations
1215 – 1230	Break
1230 – 1345	Finalization of BoQ & Cost Estimate Review for Completeness & Accuracy • Finalizing Document Formatting • Preparing Summary Sheets • Submission Procedures
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

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 “BIM Software” simulator.



BIM Software (Autodesk Revit 2024)

Course Coordinator

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