Work Study and Work Measurement: Method Study, Time Study and Staffing Levels

12 – 23 July 2027
Paris - Right Bank business hotel



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Introduction:

Staffing requests, output targets and labour budgets in many operations and offices rest on estimates rather than measured work content. Without a sound method and a reliable standard time, managers cannot tell whether a team is overloaded, underused or following an inefficient method. This Core Concept course on work study and work measurement equips participants to improve working methods through method study, then measure the improved work with stopwatch time study, work sampling and estimating techniques. Participants produce a Method Improvement and Standard-Time Study with a staffing calculation for a case process.

Course Objectives:

- Select jobs for study and plan a method study using economic, technical and human criteria
- Record present methods with process charts, flow diagrams and string diagrams and examine them with the questioning technique
- Develop, install and maintain improved methods using motion economy, workplace layout and office procedure simplification
- Measure work with stopwatch time study, performance rating and allowances to set a defensible standard time
- Apply work sampling, predetermined motion time data, analytical estimating and synthetic data where stopwatch timing is unsuitable
- Convert standard times into capacity plans, workload-based staffing levels, labour budgets and incentive standards

Target Audience:

- Industrial engineering staff who analyse operations and set work standards
- Process improvement practitioners who redesign tasks in production, logistics and service units
- Planning staff who translate output volumes into capacity and shift plans
- Organisation design and HR staff who assess workload and justify headcount
- Office and administrative coordinators who simplify forms, approvals and clerical routines

Course Outline:

Day 1: Work Study Foundations, Productivity and Job Selection

- Work Study Scope: Relationship Between Method Study and Work Measurement
- Productivity Ratios: Labour, Machine and Material Output Indices
- Work Study Ethics, Worker Consultation and Practitioner Conduct
- Job Selection Matrix: Economic, Technical and Human Criteria
- Terms of Reference and Study Plan for a Selected Job

Day 2: Recording the Present Method: Process Charts and Diagrams

- Outline Process Chart and the Five Standard Charting Symbols
- Flow Process Chart: Worker, Material and Equipment Types
- Two-Handed Operator Chart for Bench and Desk Tasks
- Multiple-Activity Chart for Worker-Machine Interference
- Flow Diagram and String Diagram for Travel Distance

Day 3: Critical Examination and Developing the Improved Method

- Primary and Secondary Questioning Sheet: Purpose, Place, Sequence, Person and Means
- Eliminate, Combine, Rearrange and Simplify Decision Record
- Therblig Analysis and Micromotion Study from Video Recording
- Principles of Motion Economy for Body Movement and Tool Placement
- Proposed-Method Chart and Savings Estimate Against the Present Method

Day 4: Workplace Layout, Ergonomics and Office Procedure Simplification

- Normal and Maximum Working Area Layout for Seated and Standing Work
- Anthropometric Data and Posture Checks in Workstation Design
- Travel Chart From-To Matrix for Department Layout Comparison
- Office Procedure Flowchart and Form Design Review
- Document Movement Analysis and Approval-Step Reduction

Day 5: Installing and Maintaining Methods: Week-One Guided Case Study

- Method Installation Plan: Trial Run, Operator Instruction and Changeover
- Written Standard Practice Sheet for the Approved Method
- Method Audit and Drift Detection After Installation
- Guided Case Study: Assembly Cell Method Study from Record to Proposal
- Guided Case Study: Service Counter Transaction Method Improvement

Day 6: Stopwatch Time Study Technique

- Time Study Equipment: Decimal Stopwatch, Study Board and Digital Timing Apps
- Breaking a Job into Elements: Constant, Variable, Manual and Machine
- Flyback and Cumulative Timing Techniques
- Number of Cycles Required: Statistical Sample Size Calculation
- Recording Foreign Elements and Irregular Occurrences

Day 7: Performance Rating, Allowances and Standard Time

- Performance Rating Scales and Rating Practice with Film Clips
- Basic Time Calculation from Observed Time and Rating Factor
- Relaxation Allowance Tables: Fatigue, Posture and Environment Factors
- Contingency, Personal Need and Machine Interference Allowances
- Standard Time Build-Up, Work Content and Standard Minute Value

Day 8: Work Sampling, Motion Time Data, Estimating and Synthetics

- Work Sampling Study Design: Activity Categories and Random Observation Times
- Sample Size, Confidence Level and Accuracy Limits for Work Sampling
- Predetermined Motion Time Systems: Basic Motions and Time Measurement Units
- Analytical Estimating for Non-Repetitive and Maintenance Work
- Synthetic Data Tables and Time Formulae for Variable Elements

Day 9: Capacity Planning, Staffing Levels, Labour Budgets and Incentives

- Standard Hours of Output and Capacity Calculation per Work Centre
- Workload-Based Staffing Formula: Volume, Standard Time and Available Hours
- Utilisation, Efficiency and Performance Indices Against Standards
- Labour Budget and Variance Report Built from Standard Hours
- Incentive Standards: Output-Based Bonus Scheme Design and Safeguards

Day 10: Capstone: Method Improvement and Standard-Time Study

- Case Process Data Pack: Volumes, Observation Records and Present-Method Charts
- Method Improvement Proposal and Savings Case for the Case Process
- Standard-Time Workbook: Element Times, Ratings and Allowances
- Staffing Calculation and Labour Budget for the Improved Method
- Study Presentation to a Management and Employee Representative Panel

Skills You Will Gain:

- Method Study
- Process Charting
- Critical Examination
- Workstation Layout Design
- Stopwatch Time Study
- Performance Rating
- Work Sampling
- Workload-Based Staffing

Why Attend This Course:

- Leave with a Method Improvement and Standard-Time Study, including a staffing calculation, built on a realistic case process
- Replace headcount debates based on opinion with figures derived from measured work content
- Practise rating and timing until your standard times can withstand challenge from supervisors and employee representatives
- Compare how work is studied in factories, warehouses, maintenance teams and back offices with practitioners from several sectors

Conclusion:

Reliable output targets and staffing levels start with a sound method and an honest measure of the work it contains. The course moves from job selection, recording and critical examination, through motion economy, layout and office procedure simplification, to installing and maintaining the improved method. Week two adds stopwatch time study, rating, allowances, work sampling, motion time data, estimating and synthetics, then turns standard times into capacity, staffing, labour budgets and incentive standards, ending with a complete study of a case process.