



CRITICAL PATH METHOD

concepts, methods, and tools you need to know to create a CPM unique to your project

COURSE CODE: NT-PM-03

LEVEL: Intermediate

LANGUAGE: Bahasa & English

OVERVIEW

CPM training teaches you how to apply critical path method in your projects. The critical path method (CPM) is a procedure for scheduling a series of project activities. CPM is usually applied in all types of projects, such as **construction**, aerospace and defense, software development, research projects, product development, engineering, and plant maintenance, to name a few. Generally, any project that contains interdependent actions could use this mathematical evaluation algorithm. While the initial CPM algorithm and technique is not being applied anymore, the phrase is usually used in any method employed to evaluate a project network logic diagram. During this hands-on course, we will provide you with the concepts, methods, and tools you need to know in order to create a CPM unique to your project.

OBJECTIVES

Upon the completion of CPM training, the attendees are able to:

- Define the project elements
- Define project management
- Understand all the process of managing the project
- Plan the project
- Understand and apply project management tools
- Understand the terms and definitions associated with CPM
- Discuss the benefits and limitations of CPM
- Articulate the CPM assumptions
- Analyze the problems and context
- Formulate the indicators
- Assess the impacts
- Perform PID
- Develop the CPM process
- Estimate the earliest start (ES) and earliest finish (EF)
- Estimate the latest start (LS) and latest finish (LF)
- Apply and evaluate crash action

COURSE DURATION

2 days (9am—5pm)

Tea Breaks: 10:30am & 3:30pm | Lunch: 1:00pm-2:00pm

Note: Please contact our office for Training Date or visit our website for details (www.zohlgroup.com)

METHODOLOGY

CPM training is made of both lectures and practical exercises. The practical exercise, making up for more than 80% of the course, includes labs, individual/group activities, role-plays, and hands-on workshops. The course agenda is designed to be comprehensive, but it is also flexible to be tailored based on the needs of your organization.

TARGET AUDIENCE

Project managers | Project engineers | Team managers | Supervisors
All professional who needs to manage scheduling of a project

LOCATION

Mindset Discovery Center™@ZOHL, Bandar Sri Damansara, Kuala Lumpur or Client's Preferred Location or selected venue in the Region(s)

COURSE CONTENT

OVERVIEW OF CPM

- What is project? | What is project management? | What is critical path method?
- Background of CPM | Essential elements of CPM | CPM advantages
- CPM limitations | CPM applications | Schedule management | CPM methods
- CPM assumptions | Task representations | Common CPM mistakes
- Project lifecycle

FUNDAMENTALS OF PROJECT MANAGEMENT

- Introduction to project management | Planning failures
- Project management lifecycle | Logical structure approach
- Problems evaluation | Context evaluation | Project planning matrices
- Formulating indicators | Project identification | Preparing and design
- Specified project planning | Budgeting and financing | Execution and monitoring
- Appraisal and evaluation | Impact analysis

PROJECT LIFECYCLE

- Project Initiation Document Component (PID)
- Permits and environmental investigations element
- Plans, Specifications, and Estimate (PS&E) element
- Right of way element | Construction element

PROJECT PROCESS

- Process units | Initiating procedures | Planning procedures
- Executing procedures | Monitoring and controlling procedures
- Closing procedures

CPM TERMINOLOGY

- Float (slack) | Critical path | Critical activity | Resource leveling

CRITICAL PATH METHOD

- Introduction to scheduling
 - ⇒ Definition of a schedule? | Why is a schedule important?
 - ⇒ What will it take to schedule?
- Software demonstration | Implementation plan | Specifications
- Roles and responsibilities
 - ⇒ Roles accountable for schedule development
 - ⇒ Scheduler / planner skills
- Early and late start: ES/LS | Early and late finish: EF/LF | Free float | Total float
- Critical Chain Project Management (CCPM) | CPM vs CCPM
- Critical paths, slack | Task "crashing" and cost | Gradual refinement
- CPM judgment

CPM DEVELOPMENT PROCESS

- Phase 1 | Breaking the project into tasks required for completion | Recognizing consecutive relationship of functions
- Phase 2 | Developing time approximations for each task | Identifying the earliest possible start time, earliest possible finish time, latest start & finish time | Modified after completion of phase 3
- Phase 3 | Creating time-cost correlation | Creating scheduling variants | Normal Start

FUNDAMENTAL APPROACHES

- Task relationships
- Network-based (graph theory) methods - CPM | PERT
- Matrix-based methods - DSM | Interrelationships are off-diagonal entries
- System Dynamics | Gantt chart

SCHEDULE FUNCTION

- Function of the schedule in an incorporated business system
- Government guidelines | Effect of system deficiencies

THE SCHEDULING DEVELOPMENT

- Major steps of a schedule process | Defining the objective
- Documenting the environment | Determining the main events to fulfill the objective | Organizing the key events based on their occurrence
- Recognizing the actions necessary to complete the key events
- Evaluate the length of each activity | Plan for executing the detailed actions
- Load and level resources | Commitment and support

PROJECT SCOPE DEFINITION

- Defining the requirements | Setting up a disciplined method
- Defining core requirement | Planning the program
- Integrated product process configuration
- Integrated Master Plan (IMP) | Integrated Master Schedule (IMS)

ZOHL CPM HANDS-ON WORKSHOP SAMPLE

Draw a critical path analysis chart for the project provided:

- * List all activities in the plan | Plot the activities as a circle and arrow diagram
- * Consider the crash action | Perform PERT

Note: Course Content subject to further review

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COURSE FEE

Peninsular Malaysia

- **With Green Card: RM530.00** per person incl. 6% SST
- **Without Green Card: RM636.00** per person incl. 6% SST

Sabah & Sarawak

- **With Green Card: RM636.00** per person incl. 6% SST
- **Without Green Card: RM742.00** per person incl. 6% SST

(Fee inclusive of Course Material, Attendance Certificate, and Meals)

CERTIFICATE

Participants will be issued a Certificate of Attendance/ Accomplishment upon successful completion of this training program. Full attendance is a pre-requisite.

CIDB CCD Points

20 (for CIDB-Registered Companies)

REGISTRATION METHOD

1. **Online:** http://zohlgroupp.com/cidb_registration/ **OR**
2. Download this brochure at: <http://zohlgroupp.com/cidb-brochures/> and fill up the required information. Then please fax to: 03.6279.0663
3. Or contact our office at: 03.6279 9276 / 013.398.1038

FACILITATOR

Mohamad Hashim Mohamad Taib, the owner and key person of HTP Management, a company formed dedicated to and in pursuit of project management excellence. He is also Associate Consultant and Trainer with ZOHL Consulting Group. Had his primary and secondary education in Pahang. Furthered his study at California State University, Chico, USA and obtained a B.Sc. degree in Construction Management. He also holds a MBA from University Selangor in 2015 with minor in Islamic Finance.



One of the project that he was involved was the transformation of technical and vocational education initiative led by the Ministry of Education (MoE). His participation includes the survey of industry needs, select and propose specific curriculums, mapping against existing syllabus within the MoE and the National Occupational Skills Standard (NOSS). This includes the preparation of teaching and learning pedagogy, approval and certification. He was also involved in the setting up of proposed colleges and infrastructures to suit the technical teaching requirement.

He has a keen interest in the field of project management and became a member of Project Management Institute (PMI), an international organization that promotes the project management field. He obtained his Project Manager Professional (PMP) certification in 2005. He is also a member of Environment Research and Development (ENSEARCH), a local non-profit association on environment.

*Note: Trainer availability is subject to change

REGISTRATION FORM

Participant : _____

Position : _____

IC No: _____

Note: please duplicate this page for multiple participants' registrations

Green Card No: _____ (only if it is applicable)

CIDB Grade G : _____ (only if it is applicable)

Training Date: _____

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Contact Person: _____

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PAYMENT

CASH: RM _____ **OR**

CHEQUE No: _____

Please fax your bank-in slip to 03.6279.0663 or scan your bank-in slip and email to plbk@zohlgroupp.com

*Please make your cheque payable to:

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Account No:
514392303373

Signature & Company Stamp

Note:

- Date & venue of seminar subject to changes
- Payment must be made 7 days before the training date
- Registration cancelled 7 days prior to the event is subject to RM100 service charge per participant
- No refunds for notice received less than 7 days prior to the event. A substitution may be made at any time at no extra charge.
- Program content may change subject to revision by our consultants from time to time.
- Full fee is required with your registration. 5% Group discount is available - min 3 pax.

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Sebarang pertanyaan sila hubungi Cik Niesa

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