



CRITICAL PATH METHOD

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

COURSE CODE: C-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.zohlgroupp.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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CALL US FOR DETAILS OR VISIT OUR WEBSITE AT WWW.ZOHLGROUP.COM



Sebarang pertanyaan sila hubungi Cik Niesa
ZOHL Consultancy Sdn Bhd (332967-D) (SST ID: W10-1810-32000429)

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COURSE FEE

PHYSICAL CLASSROOM (FACE-TO-FACE)

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)

ONLINE

- **With Green Card: RM477.00** per person incl. 6% SST
- **Without Green Card: RM530.00** per person incl. 6% SST

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:** <https://zohlgroupp.com/mdc/cidb-registration/> OR
2. Download this brochure at: <https://zohlgroupp.com/mdc/cidb-brochure/> 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

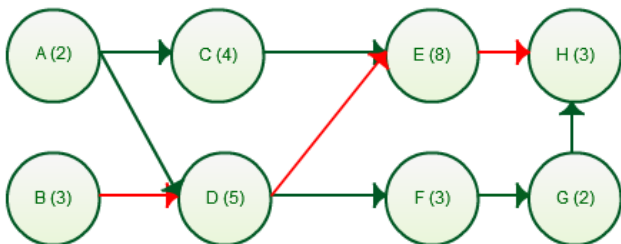
FACILITATOR

Ir Suffian Wahid - Graduated BSc in Civil Engineering from Newcastle - Upon Tyne, England in 1984 and joined Majlis Perbandaran Kuantan as Municipal Engineer for about 5 years then went for further studies to obtain Master in Engineering from the same University in 1990. At the age of 29 qualified as Professional Engineer and joined Mentiga Corporation Berhad, a 1st board public listed company as the manager for development and construction until 2005. During this same year joined Iktisas Engineers Pahang Sdn Bhd as partner doing Civil and Structural design and project management consultant. In 2012 open my wholly owned C&S Consulting firm in Shah Alam known as SW Consultant.



Experience in various property developments, Civil and Structural designs, submissions to various authorities for planning and engineering approval for construction and handing over for government and private sectors and as G7 contractors in building and civil works.

*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: _____

Training Venue: _____

Organization: _____

Address: _____

Contact Person: _____

Position: _____

Tel: _____

Fax: _____

Email: _____

Company Website: _____

PAYMENT

CASH: RM _____ **OR**

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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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