# Project Planning & Scheduling in Construction

Earn CPD Points!

AIPM members are able to claim up to 14 points by attending this two day training course.

19<sup>th</sup> & 20<sup>th</sup> May, Marriott Hotel, **Brisbane** 26<sup>th</sup> & 27<sup>th</sup> May, Hotel Grand Chancellor, **Melbourne** 

## YOUR COURSE DIRECTOR:



Patrick Weaver,
PMP, FCIOB, FAICD,
Director,
Mosaic Project Services Pty Ltd

The construction industry has one of the highest records of delayed project completions. Each year, millions of dollars are lost because of poor time management, project control and record keeping. For this reason, the project scheduler has a hugely important task. Unfortunately, due to the booming construction industry, young schedulers are rushed through training on scheduling software, and lack sufficient training on the principles of planning and scheduling. To be an effective scheduler, these principles are an absolute must.

- Can you capture the full scope of a project?
- Do you understand industry specific terms such as Forward and Backward pass?
- Can you forecast with actual costs and track costs throughout a project?
- Do you understand resource balancing and levelling?
- Have you used schedule levels and density to structure a schedule?

#### Who should attend?

Anyone involved in the planning and/or scheduling of major construction projects

- Programme Directors
- Project Managers
- Project Leaders
- Project Schedulers
- Project Planners





# ABOUT YOUR COURSE

# ABOUT YOUR COURSE DIRECTOR

This two day, practical training course, 'Project Planning and Scheduling in Construction' is crucial for new schedulers in the construction industry.

If you'd like to gain an understanding of the essential principles behind project planning and the tips and techniques of creating a masterful schedule, this training course is for you! By attending, you'll walk away with powerful knowledge to take back to your workplace and apply to your projects.

Learn how to analyse a schedule, develop a Line of Balance Chart and maintain the schedule throughout your project, by participating in interactive exercises led by a project management expert from Planning Planet, the world's largest community of online planners and schedulers.

Don't delay...you can't afford to delay your next project! Attend Tonkin Academy's 'Project Planning and Scheduling in Construction' Training 2010!

**EXAMINE** critical path scheduling processes

**DEFINE** Earned Value and Earned Schedule processes

MAXIMISE profit by staying under budget and on time

ANALYSE your cash flow to forecast effectively

**DISCOVER** resource levelling and scheduling techniques

**SAVE** money by minimising delayed projects

**DETERMINE** the emerging trends in the scheduling industry

MOTIVATE team members by updating your schedule regularly

PREPARE a Work Breakdown Structure

TAILOR the schedule structure to suit the size and intensity of the project

UTILISE schedule levels and density to structure a schedule



Patrick Weaver, PMP, FCIOB, FAICD

Patrick is one of the foundation members (#42 joined 2001) of Planning Planet, the worlds' largest online community of Planners, Project Controllers and

Schedulers. Through membership both individual and corporate our strength is in the quality, depth and scope of our community - our representatives in Australia bring this ethic to you: locally.

Patrick has worked as a project management consultant specialising in scheduling since 1985. He is the Managing Director of Mosaic Project Services Pty Ltd. His consultancy work encompasses: developing and presenting project management training courses, developing and advising on project schedules and project control systems, and the forensic analysis of project data. He is a graded Arbitrator, a trained Mediator and an experienced Negotiator.

Patrick has been a member of both PMI and AIPM since 1986 and is a member of the PMI College of Scheduling and the Australasian Regional Council of the Chartered Institute of Building.

What did delegates say about our last Project Management event?

Great case studies – very practical. The MAC Services Group Limited

Gave a good overview of what is happening in the industry and what the future trends are. Baulderstone

> Good interaction in the group sessions. Queensland Water Infrastructure

Excellent speakers and case studies Bovis Lend Lease



# ABOUT TONKIN ACADEMY'S PROJECT MANAGEMENT SERIES

The Tonkin Academy Project Management Series has a host of courses available at all knowledge levels. Starting from Introductory series and moving through to Advanced levels we are sure we have a course that caters to your needs. An example of courses available in the series are listed below:

101: Project Management Basics

102: Introduction to Project Scheduling

201: Programme Management

202: Human Resource Skills for Project Managers

302: Portfolio Management



**PROIECT** MANAGEMENT SERIES 19<sup>th</sup> & 20<sup>th</sup> May 2010 | Brisbane :: 26<sup>th</sup> & 27<sup>th</sup> May 2010 | Melbourne

# DAY ONE - 8:30 Registration - 9.00 Start

# MORNING SESSIONS

## Designing and structuring your Schedule

- Understanding the basic framework of a schedule by considering its purpose and audience
- Exploring key activities and milestones of a project, including their attributes and durations
- Utilising Logic Links by exploring the rules of logic, link types, leads and lags and the problems with links
- Exercise 1: Constructing a Schedule

#### Major Project Schedules

- Considering major aspects of schedule design
- Calculating schedule levels by managing multiple schedules at once by utilising enterprise tools
- Understanding scheduling heuristics & templates through examining guides to good practice, templates, fragnets and subprojects
- Defining project scope using breakdown structures, including the Work Breakdown Structure
- Understanding the WBS and how to use work packages and planning packages

## • Exercise 2: Develop a Work Breakdown Structure

## AFTERNOON SESSIONS

#### Schedule Analysis

- Critical Path Analysis of your schedule; the Forward Pass and Back Pass. Understanding Integers versus elapsed time
- Exercise 3: Analysing a Schedule
- Utilising Critical Path and Free Float effectively by understanding their definitions and calculations
- Considering constraints to your schedule such as dates and external pressures

#### Scheduling Uncertainty

- Understanding the confidence level of your schedule
- Exploring possible what-if scenarios and how to handle them
- Calculating the 'expected time' of your project using PERT and Monte Carlo calculations
- Realising the importance of introducing buffers and contingency on your project
- Exercise 4: PERT Calculations
- Considering logic and duration issues
- Exploring additional resources for project schedulers

#### 5:00pm Close of Day One

Lunch, Morning and Afternoon Tea and Arrival Tea and Coffee will be provided

# DAY TWO - 9.00 Start

# MORNING SESSIONS

#### Resources and Costs

- What is a resource?
- Reviewing types of resources such as people, equipment, materials, money and work space
- Allocating resources in total and per day, using profiled distribution options
- Resource analysis using aggregation, smoothing and levelling options
- Exercise 5: Resource level Schedule
- Resolving resource problems such as difficulties with the schedule, motivation, productivity and schedule compression
- Analysing your cash flow effectively to reduce funding difficulties

#### Scheduling Techniques & Emerging Methods

- Learning the history of scheduling
- Types of scheduling tool including GUI's, project focus and EPM focus
- How to use Line of Balance, Chainage Charts and Multi-Activity Charts
- Exercise 6: Developing an LOB Chart
- Exploring emerging scheduling ideas such as RDM, momentology and complexity

# AFTERNOON SESSIONS

#### Updating the Schedule

- How to gather accurate progress data including start and finish, resource utilisation, costs and percentage of work completed
- Updating the schedule and providing accurate 'status' reports
- Exercise 7: Updating the Schedule
- Exploring alternate reporting options such as coding structures and standard report formats
- Reviewing report types such as variance, trend, management and team reports
- What are the roles and responsibilities of the project team?

#### Maintaining the Schedule

- Considering all aspects of the role of a PMO
- How to manage your data using version control, change management and photo diaries and records
- Assessing your schedule using the PMI Practice Standard for Scheduling
- Minimising disputes utilising the 'Delay and Disruption Protocol' and the new CIOB 'Guide'
- Measuring your progress effectively by exploring the allied processes of Earned Value, Earned Schedule and others

5:00pm Close of Training Course

# www.TonkinCorporation.com

Email	5 WAYS	S TO REGISTE	<b>ER</b>	DATES & VENUE	<b>S</b> (Please tick)			
### The Marriott Hotel   Strongeric   Carant Chancellor   131 Londaide Street   Phone: 61 7 3903 8000   Phone: 61 7 3900 8000	<b>Phone:</b> 61 2 9224 6055							
Email	Fax:					Grand Chancellor 131 Lonsdale Street		
Dolline: www.TonkinCorporation.com  Mail: Tonkin Corporation Pty Limited, Level 12, 70 PH Street, SYDNEY NSW 2000 AUSTRALIA  REGISTRATION FORM - INTRODUCTION TO PROJECT PLANNING & SCHEDULING IN CONSTRUCTION - PRO99  YES, please register me for the above conference.  Today's date  // Dolline: Www.Tonking september of the above conference.  Today's date // Dolline: Warner // Name /	Email:			515 Queen Street	1			
REGISTRATION FORM - INTRODUCTION TO PROJECT PLANNING & SCHEDULING IN CONSTRUCTION - PRO09  YES, please register me for the above conference.  Today's date    Name	Online:	: www.TonkinCorporation.com		<b>Phone:</b> 61 7 3303 80	000 F			
VES, please register me for the above conference.    Today's date	Mail:	Level 12, 70 Pitt Stre	eet,					
Name   Na	REGISTRA	TION FORM – INTR	ODUCTION TO PR	OJECT PLANNING & SC	CHEDULING IN CO	ONSTRUCTION - P	RO09	
Name    Name	YES, please re	egister me for the above	conference.		Today's date			
Job Title	1		2		3			
Telephone	Name		Name		Name			
Email	Job Title		Job Title		Job Title			
Facsimile   Facs	Telephone		Telephone		Telephone			
REGISTER AND PAY BY:   State	Email		Email		Email			
PO Box/Street Address   City   State   Postcode	Facsimile		Facsimile		Facsimile			
PO Box/Street Address   City   State   Postcode	0							
REGISTER AND PAY BY:   Standard Price   5 Mar 2010   19 Mar 2010   2 Apr 2010   16 Apr 2010   30 Apr 2010   After 30 Apr 2010   2 Apr 2010   2 Apr 2010   30 Apr 2010   After 30 Apr 2010   2 Apr 2010   30 Apr 2010   After 30 Apr 2010   2 Apr 2010   30 Apr 2010   30 Apr 2010   After 30 Apr 2010   2 Apr 2010   30 Apr 2010	Company		DO Poy/Street Address		City	State	Postoodo	
Standard Price	Postal Address	3	1 O Box offeet Address		Oity	State	1 Ostcode	
S Mar 2010				REGISTER AND PAY BY:				
2 Day Training Course   \$2,399.00   \$2,499.00   \$2,599.00   \$2,699.00   \$2,799.00   \$2,899.00     Please Indicate Venue Selection:   Brisbane   Melbourne     GROUP DISCOUNTS:   Tonkin Corporation recognises the value of learning in Teams. Save money with one of these discounts:   Register a team of 3-4 - Save 15% off the Standard Price     Register a team of 5-6 - Save 20% off the Standard Price     Register a team of 7+ - Save 25% off the Standard Price     Register a team of 7+ - Save 25% off the Standard Price     Register a team of 7-1 - Save 25% off the Standard Price     Register a team of 7-1 - Save 25% off the Standard Price     RESEARCHED BY	INVESTMENT (including gst)			Early Bird Speci	als	Star	ndard Price	
Please Indicate Venue Selection: Brisbane Melbourne  GROUP DISCOUNTS:  Tonkin Corporation recognises the value of learning in Teams. Save money with one of these discounts:  Register a team of 3-4 - Save 15% off the Standard Price  Register a team of 5-6 - Save 20% off the Standard Price  Register a team of 7+ - Save 25% off the Standard Price  GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  PAYMENT METHODS  ABN 72 092 933 894  FIT: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited. Please quote PR009 on the cheque.  Card No: Signature: Signature: Signature: Signature: Signature: Signature Si			5 Mar 2010 1	9 Mar 2010 2 Apr 2010	16 Apr 2010	30 Apr 2010 After	30 Apr 2010	
GROUP DISCOUNTS:  Tonkin Corporation recognises the value of learning in Teams. Save money with one of these discounts:  Register a team of 3-4 - Save 15% off the Standard Price  Register a team of 5-6 - Save 20% off the Standard Price  Register a team of 7+ - Save 25% off the Standard Price  GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  ABN 72 092 933 894  FFI: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited.  Please quote PRO09 on the cheque.  CAREDIT CARD: Please charge my VISA MASTERCARD MASTER	☐ 2 Day Tr	aining Course	\$2,399.00	\$2,499.00 \$2,599.00	\$2,699.00	\$2,799.00 \$2	2,899.00	
Tonkin Corporation recognises the value of learning in Teams. Save money with one of these discounts:  Register a team of 3-4 - Save 15% off the Standard Price  Register a team of 5-6 - Save 20% off the Standard Price  Register a team of 7+ - Save 25% off the Standard Price  "GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  PAYMENT METHODS  ABN 72 092 933 894  EFI: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited.  Please quote PR009 on the cheque.  CAREDIT CARD: Please charge my VISA DINERS MASTERCARD	_		on: Brisbane	Melbourne				
Register a team of 3-4 - Save 15% off the Standard Price  Register a team of 5-6 - Save 20% off the Standard Price  Register a team of 7+ - Save 25% off the Standard Price  **GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  **PAYMENT METHODS  ABN 72 092 933 894  #*Tonkin Academy is the learning and teaching division of Tonkin Corporation. Producing exert quality training seminars on timely topics. Covering all levels of training from 101s introductory, 201s: intermediate and 301: 4d-vanced, Tonkin Academy workshops guarantee you superior training appropriate to your level of knowledge. Concerned with issues at the forefront of executive and management decision making, Tonkin Academy workshops guarantee you superior training appropriate to your level of knowledge. Concerned with issues at the forefront of executive and management decision making. Tonkin Academy workshops guarantee you superior training appropriate to your level of knowledge. Concerned with issues at the forefront of executive and management decision making. Tonkin Academy is the learning division of Tonkin Academy workshops quarantee you superior training division of Tonkin Academy and the Academy workshops quarantee you superior tra				• "				
Register a team of 5-6 - Save 20% off the Standard Price  Register a team of 7+ - Save 25% off the Standard Price  'GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  PAYMENT METHODS  ABN 72 092 933 894  EFT: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited.  Please quote PR009 on the cheque.  CREDIT CARD: Please charge my VISA Ploners or Amex  in the amount of \$								
Register a team of 7+ - Save 25% off the Standard Price  *GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  *PAYMENT METHODS  ABN 72 092 933 894    EFT: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.    CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited. Please quote PRO09 on the cheque.    CREDIT CARD: Please charge my   VISA   *DINERS   MASTERCARD   *AMEX *A credit card fee of 2.5% will apply for Diners or Amex in the amount of \$	Register a team of 5-6 - Save 20% off the Standard Price  A CADEMY  A CADEMY							
*GROUP DISCOUNT: Only one discount scheme applies. Group discount is available off the Standard Price.  PAYMENT METHODS  ABN 72 092 933 894  EFT: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited. Please quote PR009 on the cheque.  CREDIT CARD: Please charge my VISA PINERS MASTERCARD *AMEX  *A credit card fee of 2.5% will apply for Diners or Amex  in the amount of \$	• Register a to	eam of 7+ - Save 25% of	off the Standard Price			division of Tonkin Corporat	tion, producing ex-	
□ EFT: Transfer your payments to Tonkin Corporation Pty Limited at Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356. □ CHEQUE: Please make out cheque to Tonkin Corporation Pty Limited. Please quote PRO09 on the cheque. □ CREDIT CARD: Please charge my □ VISA □ *DINERS □ MASTERCARD □ *AMEX			scheme applies. Group			ics. Covering all levels of Introductory, 201: Intermed	training from 101:	
Card No: Signature:  Card No:					ABN 72 092 933 894	you superior training appro	priate to your level	
CREDIT CARD: Please charge my VISA MASTERCARD MASTERCAR	Commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.  forefront of executive and management is making, Tonkin Academy independent in the property of the commonwealth Bank of Australia BSB 062 000 Account No. 1180 6356.						management deci- emy independently	
Card No: Signature:  Card bloder's Name:  Card bloder's Speakers. Signature:  Cancellation Policy: Should you be unable to attend, a substitute delegate is always welcome at no extra charge. Alternatively a full refund, less a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *A credit card fee of 2.5% will apply for Diners or Amex  *Expiry Date:    Cardholder's Name:    Cardholder's Name:   Cardhol		trainers to bring delegates						
*A credit card fee of 2.5% will apply for Diners or Amex in the amount of \$  Card No:	☐ CREDIT CARD: Please charge my ☐ VISA ☐ *DINERS ☐ MASTERCARD ☐ *AMEX						professionals as its	
Card No: Signature:  Cancellation Policy: Should you be unable to attend, a substitute delegate is always welcome at no extra charge. Alternatively a full refund, less a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds  or legal advice. Tonkin Corporation accepts no responsibility for reliance on such information and recommends that its clients seek independent, professional advice. Tonkin Corporation is ranked 47 on the BRW Fast 100 for 2009.  Tonkin Corporation takes due care and diligence in producing its products. However, given circumstances beyond its control, Tonkin Corporation reserves the right to change any training programme without notice.				Diners or Amex		provided, is not produced by	Tonkin Corporation	
Cardholder's Name:  Cancellation Policy: Should you be unable to attend, a substitute delegate is always welcome at no extra charge. Alternatively a full refund, less a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds  dent, professional advice. Tonkin Corporation is ranked 47 on the BRW Fast 100 for 2009.  Tonkin Corporation takes due care and diligence in producing its products. However, given circumstances beyond its control, Tonkin Corporation reserves the right to change any training programme without notice.  Tonkin Corporation takes due care and diligence in producing its products. However, given circumstances beyond its control, Tonkin Corporation is ranked 47 on the BRW Fast 100 for 2009.		ii 	n the amount of \$			or legal advice. Tonkin Corp responsibility for reliance o	poration accepts no in such information	
Cardholder's Name: Signature: in producing its products. However, given circumstances beyond its control, Tonkin Corpoless a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds	Card No:			Expiry D	ate: /	dent, professional advice. To	nkin Corporation is	
Cancellation Policy: Should you be unable to attend, a substitute delegate is always welcome at no extra charge. Alternatively a full refund, ration reserves the right to change any training less a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds programme without notice.	Cardholder's N	ame:	Si	gnature :		in producing its products. I	However, given cir-	
can be made less than 21 days prior to the event.	Cancellation Policy: Should you be unable to attend, a substitute delegate is always welcome at no extra charge. Alternatively a full refund, less a \$200 service charge (including gst), will be made for cancellations received in writing up to 21 days prior to the event. Regrettably no refunds can be made less than 21 days prior to the event.							