Use the successful planning methods, practices and processes that deliver high work productivity, outstanding equipment reliability, and maximum ‘tool time’

Maintenance Planning and Scheduling for High Reliability and Maintenance Performance

Best Practices for your Maintenance and Operations Managers, Supervisors, Maintenance Planners and Schedulers, Leading Hands and Team Leaders.

Bring the best knowledge and skills to your people through this world class training course.
(We also offer maintenance planning and scheduling training via online distance education.)

Maintenance planning course improves reliability and crew productivity

This planning training is packed with the insights and the powerful techniques of successful maintenance planning and scheduling for high equipment reliability. The comprehensive content introduces you to best practice maintenance planning and scheduling systems and explains how to produce great task productivity and maintenance work quality. You learn what to do and why to do it so you can get production plant back into operation faster and running for longer. Learn how to move your maintenance planning and scheduling performance towards the Pacesetter results in the table below.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Poor Performance</th>
<th>Pacesetter Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Hands on tools time’ % possible</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>Jobs per man-day (Mech, I/E)</td>
<td>1.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Testing jobs overdue %</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Mechanics per Planner</td>
<td>8 - 10 : 1</td>
<td>20 - 27 : 1</td>
</tr>
<tr>
<td>Maintenance Workforce Weeks Backlog</td>
<td>8 - 10 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>% Planned Work</td>
<td>&lt; 50%</td>
<td>&gt; 80%</td>
</tr>
<tr>
<td>Schedule Compliance</td>
<td>&lt; 50%</td>
<td>&gt; 90%</td>
</tr>
<tr>
<td>Urgent Job Requests</td>
<td>70%</td>
<td>5%</td>
</tr>
</tbody>
</table>

High quality planning is a vital ingredient for top quality maintenance work performance and high equipment reliability. At the ‘Maintenance Planning and Scheduling for High Reliability and Maintenance Performance’ training course you learn what is done in the best job preparation and work organisation processes. You discover the good techniques, practices and methods that deliver successful maintenance planning and scheduling results. You learn the specific requirements necessary to deliver highly effective maintenance work planning and scheduling outcomes. The great Chinese philosopher Confucius said, “In all things, success depends on previous preparation, and without such preparation there is sure to be failure.” Too much time, production and money can be lost if the preparation is not done well. Knowing how to do maintenance planning and scheduling successfully is one of the many benefits you get from this world class training course. When you do maintenance planning and scheduling well you maximise your maintainers ‘tool time’ with jobs ready to go, equipment prepared and safe to work on, and all materials, resources and information at-hand so tradesmen walk from job to job, doing top quality work, right-first-time.

Great maintenance planning and scheduling lifts reliability and lowers your maintenance costs

There is a great difference between being a top Maintenance Tradesman and a top Maintenance Planner. The skill sets are completely different. This course prepares Attendees to be top-class maintenance planners and schedulers by teaching them of the
systems and processes they need to use, and providing the information, the knowledge and the skills they need to have to be successful in this incredibly important role in a company. Documented evidence confirms that proper maintenance planning and scheduling can deliver you the following benefits when compared to planning on-the-run:

- Up to 100% more work done
- ‘Tool time’ can rise to 50% of maintainers’ day
- Planned work is 4 – 12 times more efficient
- Planned work is 3 – 9 times less expensive than reactive work
- On larger jobs an hour of planning saves 3 – 5 hours execution time
- 90% of your work can be planned
- 95% of work can be done when first scheduled

The ‘Maintenance Planning and Scheduling for High Reliability and Maintenance Work Performance ’ training course teaches you how to prepare work, coordinate resources and people, install the right systems and schedule maintenance activities so maintenance work runs smoothly, maintainers deliver high-quality workmanship and are highly productive, and your machines and equipment operate reliably for far longer.

Discover how to improve maintenance planning and scheduling results

At a time when the engineering workforce is growing older and retiring, during an industry-wide and world-wide skill shortage, this maintenance planning training course teaches your maintenance planners how to organise maintenance work well and use fewer maintainers while lifting operating uptime and throughput for less cost. The course trains Attendees on the key points and best practices of planning and scheduling so when they return to work they can use the right methods and practices in the operation. Substantial and comprehensive course notes are provided and the full PowerPoint presentation are given to every attendee for future reference.

Great testimonials and unqualified support from industry for the maintenance planning and scheduling training course

People who attended the training said the following about what they experienced:

“Very good – has changed the way I think about maintenance planning.” – “Helped to give me confidence that I’m heading in the right direction in planning.” – “Usually I find if one thing of use is learnt per day then value is achieved; value has been achieved! Also good notes, CD and risk analysis template.” – “Some very good concepts to take back to work which could help our business.” – “Very interesting, more than enough information for a 3-day course.” – “The course members from industry were very impressed with the content.” – “Being a planner for only three months, I found this course excellent and relevant to my position.” – “Heaps of information put out.” – “Very informative. Eye-opener in some areas.” – “Excellent, will help with my future job prospects.”

BHP Billiton (Iron ore miner), Fortescue Metals Group (Iron ore miner), Woodside Energy (Oil and Gas producer), BGC Construction (Building products manufacturer), Wesfarmers Premier Coal (Open-cut coal miner), Pearsteel (Maintenance services), Albany Pine Plantations (Woodchip supplier), Esperance Port Authority (Bulk materials), Talison Mining (Tantalum Miner), Anglogold Ashanti and KCGM (Gold Mining), Onesteel (Steel Roll Mill), Hans Smallgoods, Hyne Timber (Saw Mill), Defence Materiel Organisation, Offshore Su Tu Den Group (Vietnamese O&G), Japanese Vietnam Petroleum (Vietnamese O&G), Canberra Hospital (Facility Management), Nickel West (Nickel Refining), Sandvik (Machine Shop), Riyadh Cement Company (Saudi Arabia) Mermaid Marine (Maritime Services) Griffin Coal Mine

Course Content Overview

**Day 1 – Maintenance and Reliability: The Foundations of Maintenance Planning**

The Purpose of Maintenance
Defect and Failure True Cost
Purpose of Maintenance Planning & of Scheduling
How Maintenance Planning & Scheduling Reduce Costs
Risk Management Fundamentals
Plant and Equipment Life Cycle
Equipment Criticality Analysis
Activity 1 - Equipment Criticality Example
Failure Mode and Effects Analysis (FMEA)
*Activity 2 – FMEA example*
Equipment Reliability Basics
Creating high Equipment Reliability

**Day 2 – Planning Maintenance Work**

Activity 3 – Applicable Maintenance Standards
The 6 Maintenance Types and when to use them
Precision Maintenance for Maximum Failure-Free Life

**Day 3 – Maintenance Planning and Scheduling**

Activity 4 – Planning Activity
Review and Discussion of Activity 4
Necessary Planning Office Systems and Methods
Data Capture for Maintenance
Specifying Workmanship Standards
Purchasing Parts and Materials
Inventory and Stores Management
Day 2 – Work Planning (continued) and Scheduling

Failure and Defect Prevention Maintenance Procedures
Controlling Work Process Variation with 3T Limits
The Accuracy Controlled Enterprise (ACE)
Standardized Planning and Scheduling Procedure
Activity 6 – Develop Standardized Planning Procedure
Activity 7 – Planning Activity with Standardized Procedure
Review and Discussion of Activity 7
Planning and Maintenance Key Performance Indicators
Activity 8 – Developing Performance Indicators

Scheduling Maintenance Work

Details of Your Presenter:

Your course Presenter applies their successful and valuable maintenance planning and scheduling background throughout the course. They mastered maintenance planning and scheduling in their careers and now pass on the very best practices to use with your staff, supervision and maintenance team. They take your people through a carefully structured course during which they impart key understandings and skills needed for successful maintenance planning and scheduling. But more than that, they use their years of experience in maintenance to focus on the critical success factors of maintenance planning and scheduling, and how to do it quickly and well, so your maintenance crew can swiftly and safely minimise cost and prevent time loss.

This course helps your organization to build sound business risk management practices into your maintenance strategy, introduce world-class lean practices, develop ultra-high reliable enterprise asset management systems and introduce the precision maintenance skills needed to continually improve your equipment performance and plant uptime. Attendees at the course learn to do their planning and scheduling roles better so they can improve maintenance performance through wise use of resources, do maintenance work in less time, and get maintenance jobs done with the least downtime.

Get your people onto a course and get improvements happening fast

The training course is delivered at the site of your choosing. Attendance at courses is limited to a maximum of 10 people. You provide the venue, the meals and transport to and from the course for your people. The presentation cost is $2,500 for each training day. The cost for each travel day is $1,000. All travel, accommodation, course materials and local transport is to your account. For arrangements that we make a 15% administration and handling fee is charged on their retail cost.

A 100% Money Back Guarantee

You get maximum protection for our seminars, courses and workshops with a 100% Money Back Guarantee. If, for whatever reason, you believe that your expectations have not been met, our fees will be totally refunded or service of equal value will be provided. As further compensation you keep all materials handed out during the presentations. (Guarantee is subject to receiving written contractual confirmation to use our services.)

More Course Information and On-Site Training Details

Course start and finish times each day are set to suit your workplace requirements. Complete the accompanying inquiry form, then chose your preferred payment option and fax it to us at (+61 8) 9457 8642, or scan it and email to info@lifetime-reliability.com. In Australia contact us on mobile 0402 731 563 or by email at info@lifetime-reliability.com to answer any questions and to get a free quotation and practical advice. Book your course with us now and choose the key people to go on the training. Tell us the dates to run the course and you have started putting plans and solutions into place to get improved maintenance performance in your operation.

Attendee get a certificate of training following full attendance of the course.
**Course Inquiry Form and Payment Options**

1 – Training Course Details:

<table>
<thead>
<tr>
<th>Training Course Title:</th>
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</thead>
<tbody>
<tr>
<td>Your Company:</td>
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<tr>
<td>Billing Address:</td>
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<tr>
<td>Training Location:</td>
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<tr>
<td>Training Dates:</td>
<td></td>
</tr>
<tr>
<td>Contact Name:</td>
<td></td>
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<tr>
<td>Phone</td>
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</tr>
</tbody>
</table>

2 - Course Fee: $2,500 per training day

Fee: $1,000 per travel day

(+ GST in Australia)

Payment terms are full payment on a 30-day account.

Attendees get course notes and workbook, plus a softcopy of the PowerPoint course and workbook with unrestricted usage rights within their company.

3 - Register:

| By Phone: | (+61) 0402 731 563 |
| By Email: | info@lifetime-reliability.com |
| By Fax: | (+61 8) 9457 8642 |
| By Post: | General Training Pty Ltd, PO Box 2091, Rossmoyne, WA, 6148, Australia |

4 – Circle Your Preferred Option for Payment:

A. **Electronic Fund Transfer** to:

| Bank: | National Australia Bank |
| Branch: | Bull Creek Branch Office |
| Shop 33 Stockland Bull Creek |
| Cnr South Street and Benningfield Road |
| Bull Creek, WA 6149 |
| Account: | General Training Pty Ltd |
| BSB No: | 086-138 |
| Account No: | 580663221 |
| Swift Code: | NATAAU3306P |

B. **Cheque** in favour of ‘General Training Pty Ltd’ sent to postal address

C. **Credit Card** secure online at [www.paypal.com.au](http://www.paypal.com.au) with Visa or MasterCard (fee applies)

PayPal On-line Payment

email address: info@lifetime-reliability.com for Order/Item # - Onsite MPS Course

D. **Purchase Order**: …………………………………………..…………..……

*(Only in Australia and USA)*

4-6 - How did you find out about the course? ………………………………………………………………………

7 - If via the Internet, which website? ………………………………………………………………………
Detailed Content of Maintenance Planning and Scheduling Course

Day 1

Maintenance Strategy and Reliability: The Foundations of Maintenance Planning

The Purpose of Maintenance
- Sustaining Production
- Equipment Reliability
- Failure Avoidance
- Defect Elimination

Defect and Failure True Cost

The Purpose and Role of Maintenance Planning and of Scheduling

How Maintenance Planning and Scheduling Reduce Costs
- The Strategic Business Importance of Planning Maintenance

Plant and Equipment Life Cycle
- Life Cycle Costs / Life Cycle Profits
- Equipment Condition Monitoring

Risk Management Fundamentals for Maintenance

Equipment Criticality Analysis – identify plant and equipment at risk

Activity – Do a simple Equipment Criticality example

Failure Mode and Effects Analysis (FMEA) - identify parts at risk and necessary maintenance.

Activity – Do a simple FMEA example

High Equipment Reliability Fundamentals
- Maximum Allowable Downtime
- Calculate True Downtime Cost per Hour
- Increasing Equipment Reliability
- Increasing System Reliability

International Engineering and Equipment Care Standards
- Alignment and Distortion
- Lubrication
- Balance and Vibration
- Bearing/Shaft Clearances
- Looseness
- Contamination and Cleanliness

Activity – Identifying Applicable Engineering and Maintenance Standards for the Site

Maintenance Types
- Preventive, Predictive/Condition Monitoring, Breakdown, Corrective, Block (Shutdown), Opportunity
- Proactive Inspection and Detection Rounds/Watch-keeping

Precision Maintenance for Maximum Failure-Free Life
- Creative Disassembly
- Precision Assembly
- Precision Installation
- Using Condition Monitoring to Test Work Quality
- Measure Machine Baseline Condition
Day 2

Planning Maintenance Work

Activity – Planning Activity and Review and Discussion of Activity

Necessary Planning Office Systems and Methods

- Work Order Costing
- Plant and Equipment Information
- Planning Documents and their Control
- Equipment Records and their Control
- Job Procedures
- Job Records and their Control
- Equipment Performance Trending
- Job Performance Trending
- Track Planning Performance & Benefits
- Job, Work and Personnel Safety

Specifying Workmanship Standards

- Standardized Work
- Setting the Standards for a Job
- Identifying Necessary Skills for a Job
- Failure Preventing Job Procedures

Data Capture for Maintenance

Inventory Purchasing and Management

- Refurbishment Decisions and Costs
- Important Purchasing Information
- Useful Store Control Practices
- Good Storage Practices
- Working with and Developing Suppliers

Project Management Principles and Practices

- Identify Work Priorities
- Set Project Goals and Objectives
- Specifications and Contracts
- PERT Charts (Critical Path)
- Checkpoints and Checklists
- Preparing for All Eventualities

The Work Planning Process

- Site Investigation
- Root Cause Analysis
- Failure History
- The Required Documentation
- Specifying Important Information to Capture During the Job
- Setting Job Performance Requirements
- Specifying Job Quality Standards
- Safety Considerations
- Calculate Maintenance Cost vs Budget
- Compiling the Job Pack
- Job Task Planning
- Scheduling the Job Plan
- Job Planning and Review Meetings
- Preparations Before the Job Starts
- Complete the Checklists
- Job and Workmanship Feedback
- Post-Job Review
- ‘Lessons Learnt’ Meeting
- Continuously Improving the Planning

Shutdown and Outages Planning

- Using Project Management Methodology
- Successful Shutdown Management Strategies

Activity – Planning Activity and Review and Discussion of Activity
Day 3

Failure Prevention and Defect Elimination Maintenance Procedures

Controlling Work Process Variation with 3T Work Quality Standards

Activity – Develop Accuracy Controlled Maintenance Procedure

Standardizing Planning Procedures and Scheduling Procedures

Activity – Develop Standardized Planning Procedure

Activity – Planning Activity and Review and Discussion of Activity

Planning and Maintenance Key Performance Indicators

- Maintenance Effectiveness Indicators
- Equipment Performance Indicators
- Production Indicators
- Planning Indicators
- Job Quality Indicators
- Supplier Performance
- Inventory/Store Management
- Safety
- Top-performance Industry Benchmarks

Activity – Setting, Measuring and Trending the Types of Performance Indicators

Scheduling Maintenance Work

Visual Management in All Occasions

Relationship Building
- Identify planning/scheduling value add
- Bring groups together to cooperate
- Request others’ improvement ideas

Production Requirements and Limits

The Production Plan
- Liaison with Production
- Scheduling into the Production Plan

Important Time Management and Scheduling Concepts

Clear Job and Work Order Scheduling

Prioritise Work Orders based on Operational Risk

Manpower Scheduling and Resources Scheduling

Activity – Design standardized Scheduling Process

Preparations before the Job Starts

Addressing On-site Issues and Changes in the Plan with Team-based Risk Analysis

Monitoring Job Performance and Schedule

Backlog Management

Activity – Scheduling to Get the Job Done Right First Time

Review of Course and Key Issues

Feedback Questionnaire

End of Course