



# Masterclass Maintenance & Reliability Practitioners



In Person Training



Assessments



3 Days of Live Interactive Sessions



Learning Kit

10 - 12 September 2025

Pittsburgh, Pennsylvania, USA

[www.biiworld.com](http://www.biiworld.com)



## **Instructor:** **Ramesh Gulati**

### **60+ Years Overall Experience**

### **He is known as the Reliability Sherpa in Maintenance & Reliability**

RAMESH GULATI is a globally recognized leader in the field of asset management, reliability and maintenance. He is a change agent author, instructor and known as the Reliability Sherpa.

Ramesh has worked for nearly 60 years in various organizations, including ReliabilityX, Jacobs-ATA/ Sverdrup, Carrier Air Conditioning; True Temper Corporation; Bethlehem Steel; and the HEC-Foundry Forge plant in several areas.

The author of several books, including “Maintenance & Reliability Best Practices” which is one of the best sellers in the world and now in its 3rd edition, “10 Rights of Asset Management”, “Uptime Elements DICTIONARY for Reliability Leaders & Asset Managers”, and “MRBP Workbook”, etc.

Ramesh has been actively involved in professional societies like SMRP, IISE, ASQ, Reliabilityweb, etc., for over 40 years.

He teaches the Reliability Maintenance best practices course at several universities such as Mississippi State, The University of Tennessee, and Wisconsin. He also participates in the ISO technical committee for Asset Management TC251 as a representative of USA TAG for the development and update of ISO 55000 - Asset Management Standard.



## Course Description



This 3-Day in-person workshop would help to understand the fundamentals of maintenance, reliability, and asset management principles. The knowledge you gain in this workshop will help you effectively implement best practices (BP) to make a difference at your workplace. In addition, this workshop will review the body of knowledge (BoK) of maintenance, reliability & asset management-related certification, and guide to be successful in the CMRP exam.

## Certification



The Certified Maintenance & Reliability Professional (CMRP) program is the #1 leading credentialing program for certifying the knowledge, skills, and abilities of maintenance and reliability professionals worldwide. The CMRP is accredited by the American National Standards Institute (ANSI), which follows globally recognized ISO standards for its accreditation and processes. Earning this certification means earning a coveted credential recognized across all industries internationally.

To register for CMRP exam, click on the below link and follow the on screen instructions.

<https://smrp.org/CMRP-Registration>

To find the nearest authorised testing centers, click on the below link

<https://smrp.org/Certification/Test-Center-Search>

## Learning Objectives



- The maintenance, reliability, and asset management-related terminology.
- The maintenance reliability & asset management-related best practices
- The role of leadership and the importance of change management in implementing successful reliability programs, including culture
- Planning and scheduling process, including inventory/spares management.
- The role of operations in implementing a reliability program.
- Measuring and calculating the reliability – RAM parameters
- Supporting asset design from RAMS2O perspective
- Measuring performance and designing the right metrics system
- Managing the workforce effectively to improve productivity.
- Problem-solving and improvement tools
- Standards, standardization, and certifications
- Current trends and practices, including Industry 4.0/Digitalization.
- Body of Knowledge (BoK) of key certification, i.e., SMRP/CMRP, CRL, etc., and test-taking tips
- RAMS2O = Reliability, Availability, Maintainability, Safety/Sustainability, and Operability



## Who Should Attend?

- Maintenance Managers
- Maintenance Superintendents
- Maintenance Engineers
- Maintenance Planners
- Reliability Engineers
- Plant Managers
- Engineering Managers
- Manufacturing Managers
- Production Managers
- Operations Managers
- Asset Managers

## Training Methodology



Instructor-led classroom lectures, real-life exercises, case studies reviews, role-playing, scenarios, and group discussions using an integrated approach.

24 hours of course time (inclusive of breaks)



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# Day 1

🕒 09:00

## Introduction & Safety Moment

- Introduction of Speaker
- Expectations
- Introductions and course objectives & Course Overview

10:30 - 10:45 Coffee Break

🕒 15min

## Introducing Best Practices

- What and why best practices
- Safety, reliability, and productivity relationships
- Value and examples of benchmarks
- Basic test on M&R- AM knowledge
- Self- Assessment questions

## Culture and Leadership

- Defining Leadership
- Strategic framework- vision, mission, and goals
- Defining culture – reliability culture
- Creating/sustaining a culture of excellence/ reliability
- Importance of Leadership in Building Culture
- Self- Assessment questions

13:00 - 14:00 Lunch

🕒 60min

## Understanding Maintenance

- Defining maintenance
- Maintenance classifications/practices
- CMMS/EAM
- Maintenance assessment
- Measures of performance
- Self- Assessment questions

## Work Management

- Workflow and roles
- Work classification and prioritization
- Planning Process
- Scheduling process
- Turnaround and shutdowns
- Measures of performance
- Self- Assessment questions

15:30 - 15:45 Coffee Break

🕒 15min

## Materials, Parts, and Inventory Management

- Why inventory management
- Types of inventories
- Physical layout and storage equipment
- Optimizing tools and techniques
- Measures of performance
- Self- Assessment questions

🕒 17:00

## Close of the Day 1



# Day 2

09:00

## Measuring and Designing for R&M

- What and why reliability
- Measuring/calculating reliability and other terms.
- Designing for Reliability - RAMS2O
  - DIO-PF curve
- Measures of performance
- Self- Assessment questions

10:30 - 10:45 Coffee Break

⌚ 15min

## Operations Role – Operator Driven Reliability

- The role of operations/operators
- Total Productive Maintenance (TPM)
- Workplace organization – 5 S
- Overall Equipment Effectiveness (OEE)
- Measures of Performance/Exercises
- Self- Assessment questions

## Maintenance Optimization

- Understanding failures – PF & DIO-PF curve
- Maintenance strategy-RCM
- Maintenance strategy – CBM
- Other strategies
- Measures of performance
- Self- Assessment questions/Exercises

13:00 - 14:00 Lunch

⌚ 60min

## Managing Performance

- Why performance measures?
- Types of performance measures
- Data collection and quality
- Benchmarking and benchmarks
- Measures of performance -KPIs
- Self- Assessment questions/Exercises

## Workforce Management

- Employee lifecycle
- Understanding Generation gap
- Importance of communication
- People development – training
- Resource management
- Measures of performance
- Self- Assessment questions

15:30 - 15:45 Coffee Break

⌚ 15min

## Problem Solving and Improvement Tools

- Types of problem-solving tools- 5 whys, RCA, FMEA, Pareto, etc.
- Six Sigma and Lean tools – Waste elimination, VSM, SPC, etc.
- Improvement strategies and practices
- Defect elimination process
- Measures of performance
- Self- Assessment questions/exercises

⌚ 17:00

## Close of the Day 2



# Day 3

09:00

## Standards, standardization, and Certification

- Defining codes, standards, & standardization
- Types of standards
- Management process standards
- Asset Management related standards
- ISO 55000 – Asset Management Standards
- Value of certification
- Measures of performance
- Self- Assessment questions

10:30 - 10:45 Coffee Break

⌚ 15min

13:00 - 14:00 Lunch

⌚ 60min

## Current Trends and Practices including Industry 4.0 digitalization.

- Sustainability
- Safety management
- Risk and Project management
- Corrosion control
- Industry 4.0 and digitalization
- Stress, wellness, and productivity
- Self- Assessment questions

15:30 - 15:45 Coffee Break

⌚ 15min

## Class / Team exercises and discussion

- Team exercises to apply "Learnings."
- Presentations by the teams

⌚ 17:00

## SMRP /-CMRP Body of Knowledge Review - Q/A Close of the Day 3

### Suggested Reading Materials for CMRP Exam:

1-Req: Maintenance & Reliability Best Practices 3rd ed. By Ramesh Gulati; Industrial Press (ISBN 978-0-8311-3647-5)

2-Req: WORKBOOK to accompany MRBP 3rd ed.by Ramesh Gulati and Christopher Mears; Industrial Press (currently out of print... under revision)

In lieu, the key presentation slides (PDF) are provided

3- Optional: Uptime Elements' DICTIONARY for Reliability Leaders and Asset Managers, by Ramesh Gulati (ISBN: 978-1-941872-63-5) Reliabilityweb Publication

4- Optional: 10 Rights of Asset Management by Ramesh Gulati and Terrence O'Hanlon; Reliabilityweb publication (ISBN: 978-1-941872-83-3)

Making Common Sense Common Practice by Ron Moore

Reliability Centered Maintenance by John Mourbray



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Please complete this form and send it back to  
[mithun.siddartha@biiworld.com](mailto:mithun.siddartha@biiworld.com)

**Event Code: AM TE 66**

## Delegate Details

1. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....
2. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....
3. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....

### PAYMENT METHOD:

CREDIT CARD ☐

The secured payment link will be shared/sent

WIRE TRANSFER OR BANK TRANSFER ☐

### Authorization and Acceptance of Sales Contract & Terms & Conditions

I hereby declare I am authorised to sign this contract and terms  
& conditions in the name of the company/organisation:

## Company/Organisation Detail

Name: .....  
Person to Contact:.....  
Email: .....  
Address: .....  
.....  
City: .....  
Country: .....  
Contact No: .....  
Type of Business: .....  
Website: .....

Name:.....

Date:.....

Signature:.....

**Delegate Fee** ☐ **USD 2299 per delegate**

(Delegate fee does not include CMRP Exam fee)

20 USD administration charge and any applicable withholding or any other tax or fee will be applied

### TERMS & CONDITIONS:

1. Payment terms: BII World LTD requires the full payment of the invoiced amount within 7 working days from the issue date of the invoice. BII World LTD reserves the right to refuse entry to any client who does not pay the invoice in full and on time. The registration fee includes: Training documentation and admission to all training sessions.

2. Cancellation by client: The client has the right to cancel his/her participation in the event. Cancellation must be received by BII World LTD in writing either by mail or fax. If the client cancels the event, he/she will get two options:

- A. CREDIT NOTE:** Choose 2-year credit note, BII World LTD will send all the schedule training event details throughout the year. Delegate has the right to choose and attend any of the future training programs of BII World (valid 2 years).

**B. NOMINATION:** In this option delegate can nominate/refer someone from his/her group/company to attend the particular training program on behalf of the actual delegate.

3. Cancellation by BII World LTD : While every reasonable effort is made to adhere to the advertised program, circumstances can arise which may cause changes in the program, including but not limited to changes in the content, date(s), or special features of the planned event. Such circumstances include but are not limited to acts of terrorism, war, extreme weather conditions, compliance with government requests, orders and legal requirements, failure of third-party suppliers to timely deliver, and failure to register the minimum target number of attendees for a given event. BII World LTD reserves the right to change the content, date(s), and/or special features of an event, to merge the event with another event, or to postpone it or cancel it entirely as appropriate under the circumstances. Client agrees that BII World LTD shall not be liable for any cost, damage or expense which may be incurred by client as a consequence of the event being so changed, merged, postponed or canceled and client agrees to hold BII World LTD harmless and to indemnify BII World LTD in case of liability caused by any such changes, mergers, postponements or cancellations.

4. Cancellation of the event: In case BII World LTD cancels an event, then client can choose any of the below mentioned options:

- (a) BII World LTD will refund full payment to the client within 15 business days.  
(b) Client can choose the credit option for 2 years, for more details please read term no-2 part (a)

5. Postponement of the event : In case BII World Ltd postpones the event to a new date, then client can choose any of the below mentioned options.

- (a) The client can attend the course on the postponed dates.  
(b) Client can choose the credit option for 2 years, for more details please read term no-2 part (a)

6. Client's identification information. By signing of this sales contract and these terms and conditions the client gives full right to BII World LTD to share the client's identification information, i.e. client's name, address, email addresses, phone numbers and names of representatives and website with other clients who participated in the same event. The client has the right to opt out of this clause by written notice to BII World LTD.

7. Governing law: This contract shall be governed by and construed in accordance with the laws of the Province of Alberta, Canada. Any disputes arising under or in connection with this registration form shall be sealed before the competent court in Canada.

8. Indemnification: To the fullest extent permitted by the law, you agree to protect, indemnify, defend and hold harmless BII World LTD, its owners, managers, partners, subsidiaries, affiliates, officers, directors, employees and agents, from and against any and all claims, losses or damages to persons or property, governmental charges or fines, penalize, and costs (including reasonable attorney's fees) (collectively "the Claims"), in any way arising out of or relating to the event that is the subject of this contract, and regardless of negligence, included but not limited to, Claims arising out of the negligence, gross negligence or intentional misconduct of BII World LTD employees, agents, contractors, and attendees; provided, however, that nothing in this indemnification shall require you to indemnify BII World LTD Indemnified parties for that portion of any Claim arising out of the sole negligence, gross negligence or intentional misconduct of the BII World LTD parties.

9. Other currencies. In case that client requests payment in other than official currency (USD), BII World LTD reserves the right to apply 5% currency risk surcharge to the actual exchange rate.

10. Other Conditions: Any terms or conditions contained in the client's acceptance which contradict or are different from the terms and conditions of this registration document shall not become part of the contract unless individually negotiated with BII World LTD and expressly accepted by BII World LTD.