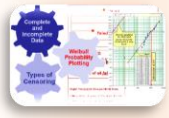
Institute of Quality & Reliability



Certified Reliability Engineer (CRE)

Online Workshop

As per revised 2025 CRE Body of Knowledge)

Duration 70 hours of Instructor led online sessions during 14-October to 30-November 2024

(No sessions during Diwali week of 28-October-24)

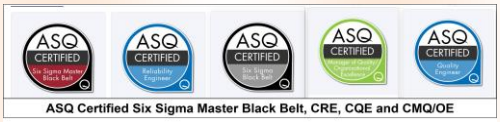
Access to Recorded Sessions

Qualified Faculty with multiple ASQ Certifications

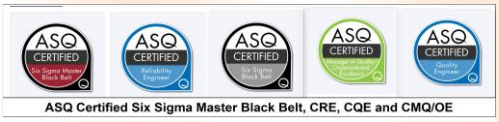
Access to Simulated online exams

Two Faculty Members with 10 ASQ Certifications!

Hemant Urdhwareshe

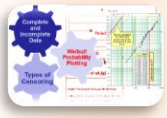


Yashwant Mahakal



Institute of Quality and Reliability has conducted Reliability Engineering Training for Tata Motors, BEL and DRDO (through ASQ India), Elaraby (Egypt), M&M, MIQ, L&T, Behr India, Thermax, Quest Global, ARAI, Dana Anand, Carraro India etc.

Visit our website:
http://world-class-quality.com/
Contact us: email: iogr@world-class-quality.com
Phone: 9822014488



Institute of Quality and Reliability (IQR)

Announces

Online Reliability Engineer Workshop

(Focused on preparation for ASQ Certification)

On-line Schedule: Four-Days-a-week for six weeks

Mon-Wednesday-Friday-Saturday (6:30 PM to 9:30 PM India Time)

Note: We will additionally send prereading material and links to many useful videos and related quizzes. Participants need to go through these as a part of the workshop. This is necessary as the CRE body of knowledge (BOK) is vast and virtual classroom time is limited to about 70 hours.

Introduction:

Assuring Reliability of new products is a major challenge for senior management of most organizations. This Reliability Engineering workshop is designed to provide in-depth understanding of Reliability Engineering Basics, Life Data Analysis, Reliability in Design, Reliability Testing, Maintainability and Availability and various Statistical Techniques. For more details, see agenda of the workshop in this brochure.

According to American Society for Quality (ASQ): *"The Certified Reliability Engineer (CRE) is a professional who understands the principles of performance evaluation and prediction to improve product/systems safety, reliability, and maintainability." The CRE Body of Knowledge (BOK) and applied technologies include, but are not limited to, design review and control; prediction, estimation, and apportionment methodology; failure mode and effects analysis; the planning, operation, and analysis of reliability testing and field failures, including mathematical modeling; understanding human factors in reliability; and the ability to develop and administer reliability information systems for failure analysis, design, and performance improvement and reliability program management over the entire product life cycle."*

This workshop is designed based on revised **CRE BOK (2025) published by American Society for Quality which will be applicable from January 2025 onwards.** The course material includes a soft copy of training material from the Institute of Quality and Reliability. Online training is supported with exercises and tutorials. Participants are expected to keep scientific calculators and laptop computers available during training for effective learning. Some of the hands-on exercises are designed using Minitab Software and templates so that participants can analyze their own data after completing the workshop.

Who should attend the training?

The course is most appropriate for engineers and managers involved in

- Design and/or Development of New Products
- Reliability Testing of Products
- Quality Assurance and improvement of current and new products
- Warranty Data Analysis and improvement
- Problem Solving and Quality/Reliability Improvement
- Maintenance Engineering

Considering the course contents, it is expected that participants should have basic understanding of business processes, should be able to use scientific calculators and computers, and should have knowledge of basic mathematics and science.

Agenda for the Training:

Workshop will be conducted as per CRE body of knowledge (BOK) prescribed by American Society for Quality (ASQ). However, the workshop will focus on topics that are somewhat difficult to understand without faculty communication.

The course will cover ASQ BOK which is divided in to five main clauses:

1. Reliability fundamentals
2. Risk Management
3. Statistics and Probability for Reliability
4. Reliability Planning, testing, and modelling
5. Life Cycle Reliability

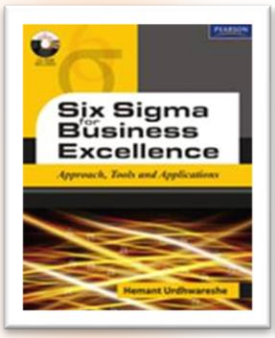
Body of knowledge can be downloaded from https://asq.org/cert/reliability-engineer.

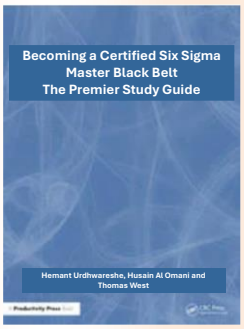
Test of Comprehension: After completing the workshop, participants will get access to two on-line simulated exams and one online final Certification Exam of 150 questions. These are in addition to practice questions given during the workshop. Participants passing the test with the threshold set by the institute will get certified as Reliability Engineer from IoQR. (For certification, the final test may be under camera and a government photo ID required.)

Requirements for ASQ Certification: To appear for ASQ certification exam, if participants are a graduate, they must have four years of on-the-job experience in one or more of the areas of the CRE BOK. A minimum of three years of this experience must be in a decision-making position For more information about ASQ certification, visit web siteHttps://asq.org/cert/reliability-engineer.

Faculty:

Mr. Hemant Urdhwareshe, is the Principal Consultant and Director Institute of Quality and Reliability (IQR). Hemant has total 47 **years of experience including 28-years in Manufacturing, Quality and Engineering at Cummins India Limited (CIL) and 19 years as a trainer and principal consultant at IQR**. As Head of Quality, Reliability and subsequently Engineering functions at CIL, Hemant was actively involved in driving Reliability Improvement and Six Sigma programs and has led and sponsored many complex reliability improvement projects. He has applied various Reliability and Six Sigma tools in reducing field failures and improving New Product Reliability.





Hemant has conducted numerous CRE and Six Sigma training programs for many large company such as Ashok Leyland, Tata Motors, M&M, MIQ, Bosch, L&T, BEL(*), DRDO(*) (*both through ASQ India), TAFE, Thermax, Quest Global, ARAI, Dana, SAP Parts etc. He was a panelist for the Lean Six Sigma Awards organized by Symbiosis Center for Management and Human Resource Development (SCMHRD). Hemant was a visiting faculty at Symbiosis Institute of Business (SIBM) Management for Six Sigma and Business Statistics. He has authored a book 'Six Sigma for Business Excellence' which was

published by Pearson Education in September 2010. He has also coauthored the book 'Total Quality Management' which has been published in October 2010 with his wife Rashmi. Hemant is a coauthor of the forthcoming book 'Certified Six Sigma Master Black Belt: The Premier Study Guide' under publication by Taylor and Francis. Hemant has published many papers in various reliability and other technical conferences.

He is:

- **A Fellow of American Society for Quality (ASQ), recipient of *Silver Standard 2003 award from Qimpro Foundation* for outstanding Quality Manager in India, Quality Champion Silver Award 2018 from QCI-DL Shah Trust and Quality Leadership Award from World Quality Congress.**
- ***The first Six Sigma Master Black Belt in Asia certified by American Society for Quality (ASQ) as on 5 December 2010***
- The *first* ASQ Certified Quality Manager in India (1998)
- ASQ Certified Quality Engineer (1996) and
- **ASQ Certified Reliability Engineer (2005)**
- The *first person in India with five or more certifications from ASQ*
- Fellow of IIPE and Senior Life Member of National Center for Quality Management. (NCQM).
- Qualified Lead Assessor

Mr.Yashwant Mahakal is a mechanical engineer from VJTI with rich experience in Automotive and Engineering Industries including TATA Motors, Fleet guard Filters (Cummins Group), Filtrum Tools, TACO Group, Veena Industries in the areas of Lean Manufacturing Systems / Quality Assurance / Quality Management Systems/ Product Development / Supplier Development and Costing. He has four years of consulting experience in the Areas of Lean Manufacturing and Quality Management Systems. He has successfully implemented many lean manufacturing projects.
He is **certified by American Society for Quality (ASQ) as:**

- **Six Sigma Master Black Belt (CMBB)**
- **Six Sigma Black Belt (CSSBB)**
- **Quality Engineer (CQE)**
- **Manager of Quality and Organizational Excellence (CMQ/OE) and**
- **Reliability Engineer.[CRE]**

Yashwant is also certified as ***Lead Assessor for***

- ***Quality Management Systems (ISO9001:2008),***
- ***Environmental Management Systems ISO14001:2008 and***
- ***OHSAS18001:2007.***

Course Material:

1. *Comprehensive workshop material from IQR will be sent by email. Participants can print one copy only for their own reference. Training material is copyright and nontransferable.*
2. *Many useful tables, templates, and data files by IQR.*

Course Fees:

Refer registration form for details of course fees.

Payment:
Registration will be confirmed after payment by to "Institute of Quality and Reliability, Pune". Refer registration form for details of fees and payment related information.

About Institute of Quality and Reliability:

Institute of Quality and Reliability (IQR) was established in November 2005, with primary objective to help Industries for improving their business performance. IQR also supports individuals aspiring to improve their knowledge and skills in Quality and Reliability. After 28 years of rich industrial experience in the industry, at Cummins India Ltd. (CIL), Hemant Urdhwareshe decided to start IQR. So far, we have trained about 600 reliability engineers and more than 6500 individuals in the field of Quality and Reliability and Six Sigma.

For registration or more information Contact us:

Institute of Quality and Reliability
Plot No.39, Shantiban Society
Near Gandhi Bhavan
Kothrud, Pune 411038.

Phone:
Hemant Urdhwareshe: +919822014488
Yashwant Mahakal: +919960270692
Note: Send SMS or WhatsApp message in case phone is not reachable or not answered.

Email: hemant@world-class-quality.com
Web site: www.world-class-quality.com

*We are proud to be associated with our Customers:*http://www.world-class-quality.com/