

# Register for the July 11-13, 2017 Workshop

Failure Mode, Effects, & Criticality Analysis /  
Reliability & Maintainability

## FMECA / R&M Workshop

Presented by:



**Acquisition Logistics Engineering**

Become familiar with methodologies for accomplishing and integrating key elements of R&M activities, including FMECA

Tutorial-based exercises develop hands-on experience in applying R&M and FMECA concepts, techniques, and principles

Understand how to manage and best utilize R&M activities within your organization to positively impact your products and programs

Gain practical knowledge of key activities within a successful R&M program

ALE's **Beginner** to **Intermediate** Level 3-Day Course is perfect for Logisticians, System Engineers, and Design Engineers

### Online:

Go to [www.ale.com](http://www.ale.com) and complete the online registration form.

**Limited Seating**

### To Register

### By Email:

Respond using the link below with your name, company, email, and phone number.

[Register](#)

For additional information, contact Stephen Brunner:  
E| [sbrunner@ale.com](mailto:sbrunner@ale.com) P| (614) 436-1609

### Location



The workshop will be held at the Indesign facilities:

8225 E. 56<sup>th</sup> Street  
Indianapolis, IN 46216

### Cost:

\$1200 per person

*Earlybird* discount of \$100 before July 1<sup>st</sup>

\$200 CLEP Member Discount

\* Due to facility ITAR restrictions, attendees must be U.S. citizens

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This three-day workshop provides training on performing Reliability and Maintainability (R&M), and FMECAs using current methodologies. System reliability and maintainability represent measurable design aspects that are key parameters to satisfying both life-cycle performance requirements as well as customer expectations. Failure Mode, Effects and Criticality Analysis (FMECA) is the most commonly applied deductive reasoning technique used to identify potential product and process failure modes and their subsequent effects. These activities are commonly applied for the following purposes:

- Eliminating product or process downtime
- Eliminating undesired failure modes through design improvements
- Reducing the effects or probability of failure mode occurrence
- Improving safety and availability of the product
- Providing critical inputs to product support planning

Attendees will become familiar with current R&M prediction and FMECA techniques and develop hands-on experience in applying these techniques using sample products, and documenting the results in accordance with industry standards. Attendees will also discuss aspects to be considered while performing these activities, and how to communicate and use results of these analyses to improve their team's products or processes.

## TOPICS COVERED

- Introduction and R&M, FMECA Overview
- Definitions and Terminology
- Subject Related Standards and Guidance
- Overview of Reliability and Maintainability Predictions
- R&M Allocation and Prediction Techniques
- The FMECA Process
- Understanding Analysis Requirements
- Defining the Approach
- Developing Functional Block Diagrams and Reliability Block Diagrams
- Identifying Failure Modes, Causes, and Effects
- Estimating Probabilities, Failure Rates, and Failure Mode Ratios
- Identifying Compensating Provisions and Design Controls
- Evaluating Severity and Criticality