



DESIGN FAILURE MODE AND EFFECTS ANALYSIS (DFMEA)

COURSE OVERVIEW

Design FMEA is a systematic, team-based method for identifying potential failures in product designs, assessing their severity, occurrence, and detection difficulty, and prioritizing design changes to prevent failures before production. This course was developed by practitioners, for practitioners, to build robust product designs and support global regulatory compliance.

COURSE CURRICULUM

- FMEA Background & Standards
- FMEA Tool Introduction & Structure
- DFMEA & Design Verification
- Failure Modes Identification
- Failure Effects Analysis
- Failure Causes & Mechanisms
- Severity, Occurrence & Detection Ratings
- Control Types: Prevention & Detection
- Risk Priority Number (RPN) Calculation
- Severity-Weighted Prioritization
- DFMEA to Design Verification Translation
- Function Analysis & Verb-Noun Method
- DFMEA Examples & Case Studies
- DFMEA Best Practices & Living Document

COURSE AT A GLANCE

Price: \$1,500
Lessons: 171
Video Content: 2 hours
Quizzes: 13
Final Exam: 1
Time Limit: 60 days
Certificate: Yes, upon passing
Format: Self-paced

LIVE EXPERT SESSIONS

Each student receives two live virtual sessions with a DQS expert:

Before Class: 30-minute orientation session

After Class: 60-minute Q&A and implementation support

90 minutes of personalized expert guidance included!

DOWNLOADABLE FILES

- Complete course slides
- Sample DFMEA procedure and templates
- Sample device exercises with DQS answers

LEARNING OBJECTIVES

- Explain foundational concepts of DFMEA and how it integrates with ISO 14971 and Design Verification requirements
- Apply systematic tools such as function analysis, component hierarchy diagrams, and Parameter Diagrams to identify failure modes
- Conduct root cause analysis using failure mechanism analysis and design margin evaluation
- Evaluate failure mode risk using severity, occurrence, and detection to calculate RPN values
- Apply severity-weighted prioritization methods to focus on the highest-risk failure modes
- Translate DFMEA into comprehensive design verification protocols aligned with design phases
- Develop and sustain DFMEA as a living document that improves with field data and learning
- Identify appropriate control types (prevention vs. detection) based on risk characteristics
- Apply DFMEA best practices to avoid common pitfalls and ensure audit readiness
- Connect DFMEA outputs to Design Verification/Validation protocols and design transfer

ENROLL TODAY

Enroll in the self-paced DFMEA course today at <https://designqualityservices.thinkific.com/courses/DFMEA-ENG>. Each enrollment includes 90 minutes of personalized live expert guidance.