Measurement System Analysis

Course description

"Measurement System Analysis (MSA) Fundamentals" provides a comprehensive understanding of measurement variation and its impact on quality assurance within the medical devices industry.
The course explores various sources of variation when taking measurements, including instrument calibration, resolution, accuracy, bias, and stability over time. Additionally, participants will learn about the causes of variation, such as operator variability, part-to-part differences, environmental influences, and random and systematic errors. The course also delves into MSA attributes, covering planning, execution, and analysis, along with an overview of different types of MSA, including destructive and non-destructive methods.

At the end of the course you will able to:

- Grasp the sources and causes of variation when taking measurements, enabling them to identify and mitigate potential sources of error.
- Learn how to plan, execute, and analyze Measurement System Analyses, ensuring robust measurement processes and reliable data collection.
- Gain practical experience in executing MSA procedures, enhancing their ability to implement best practices and improve measurement accuracy and precision.
- Understand different types of MSA, including destructive and non-destructive methods, and be able to select and apply the most appropriate approach for their specific measurement needs.

Main topics

1 Sources of variation
- Instrument calibration
- Resolution
- Accuracy
- Bias
- Stability over time
- Causes of variation

2 Variation of operators
- Part Part variation
- Environmental variation
- Random variation
- Systematic variation
- Sampling variation

3 MSA attributes
- How to plan it
- How to execute it
- Analysis
- MSA variables

4 Type of MSA
- Plan
- Execution
- Analysis

Course features

Instructor Led
Duration: 12 hours
Tools and templates
Simulated learning
Course certification

Contact

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