

The purpose of this course is to provide students with the tools required for analyzing data and using this analysis in solving practical problems. You will learn the basics related to Inferential Statistics. Moreover, these tools will be focused on solving common problems faced by engineers in manufacturing and designing medical devices. This course is given with the support of software traditionally used in this industry and based on application cases.



COURSE CONTENT

1. **Statistical Techniques Applied in Manufacturing**
 - Statistical Concepts
 - Confidence Level
 - Confidence Intervals
 - Sampling Plans
 - Attribute
 - Variable



Duration

12 hours



E-learning platform

Tools and templates



Hands to work

Simulated learning



Certification

After successful course
completion



COURSE CONTENT

1. Statistical Techniques Applied in Manufacturing

- Normality
 - Normality Assessment
 - Outliers
 - Rounding
 - Mixed Populations
 - Truncated data
 - Population shifts
 - Data Analysis
- Capability Analysis
 - Cp and Cpk Concepts
 - Pp and Ppk Concepts
 - Difference between Pp vs Cp & Ppk vs Cpk
 - Data Transformation
 - Non normal data
 - Distribution fit Identification
 - Box-Cox Transformation
 - Johnson Transformation
 - Lognormal Transformation

**Duration**

12 hours

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At the end of the course you will be able to

- Make decisions through the interpretation of data from applied examples.
- Determine the appropriate methods for data collection.
- Understand the distribution of normal data and the main problems of rounding, outliers, mixed populations, and truncated data.
- Evaluate the normality of the data through the application of examples.
- Learn about the process for performing capacity analysis.
- Know the appropriate statistical values for a process to be capable of meeting specifications.
- Know the main tools that can be used in software to determine the capacity of a process.



At the end of the course you will be able to

- Interpret through the application of examples, when a process is capable or not of complying with the specifications.
- Perform transformations on non-normal data.
- Apply the knowledge acquired to solve multiple real case situations throughout the class.