

# Statistical Process Controls (SPC)

## **Course description**

This course provides a solid foundation in Statistical Process Control (SPC) and its relationship to continuous improvement in medical environments. Participants will explore common and special causes of variation, as well as the seven main tools of SPC. Control Charting as an essential tool for process control will be explored in depth, addressing fundamental statistical concepts and their application for process improvement. Practical considerations for the implementation and proper choice of control charts, along with guidelines for effective implementation, complete the course, equipping participants with key skills for quality management in medical environments.

#### At the end of the course you will able to:

- Identify common and special causes of variation in medical processes.
- Use the seven main SPC tools to analyze and improve process quality.
- Construct, interpret and apply Control Charts by variables, including mean and range, mean and standard deviation, medians and range, and single values with moving ranges. median and range, and individual values with moving ranges.
- Manage Control Charts for attributes, such as fraction of nonconformances, number of nonconformances, and other attributes relevant to the medical industry. other relevant attributes in the medical industry.
- Contribute to the continuous improvement of medical processes by applying statistical techniques and tools learned during the course. learned during the course.
- Make informed decisions based on the interpretation of Control Chart results to maintain quality in medical industry processes. in medical industry processes.
- Apply the knowledge acquired to manage and improve the quality of processes in their specific working environment within the medical field.

# Main topics

- 1 Statistical Process Control and Continuous Improvement
  - Introduction to Statistical Process Control
  - Variation: Common Causes and Special Causes
  - The seven main tools of SPC
- 2 Control Charting, a Tool for Process Control
  - Benefits of Control Charting
  - Statistical Basis for Control Charting
  - Considerations for Sampling implementation

- <sup>3</sup> Control Charts by Variables
- 4 Control Charts for attributes
- 5 Considerations for Control Chart Implementation

## **Course features**

- Instructor Led 2 Duration: 12 hours ( Tools and templates 🔆 Simulated learning 🔊
- Course certification

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