Design of Experiments

Course description

This course introduces the student with the fundamentals of Design of Experiments, a powerful set of tools that combine statistical knowledge with detailed experiment planning in order to efficiently understand how different variables and their interactions affect one or several process, product characteristics or outputs. Process characterization and engineering studies for process validation and Process Change Assessment, Root Cause Analysis including CAPA and NC Analysis are some of the process that regularly benefits from DOE in the medical device industry.

At the end of the course you will able to:

- Understand the main concepts related with the Design of Experiments process and analysis.
- Set an experimentation plan.
- Perform experiments in order to discriminate the variables that are relevant to the characteristic under analysis, including full factorials and fractional.
- Isolate the experiments from factors that could mislead the decision-making process and are not of interest in the analysis through the proper experiment planning and using blocking and confusion as experimentation tools.
- Correctly Interpret experiment results.
- Analysis of non-linear responses and optimization approaches.

Main topics

1. Introduction to DOE and terminology.
2. 2n Factorials.
3. Fractional.
4. Blocking and Confusion.
5. Center Points DOE.
6. Surface Response.
7. DOE Planning.
8. DOE Practice.

Course features

- Instructor Led
- Duration: 21 hours
- Tools and templates
- Simulated learning
- Course certification

Contact

www.smdlearning.com

info@smdlearning.com

+506 8544 7000

Costa Rica