# Programme de Formation

## Refresh statistical data analysis with your software of choice

## Organisation

**Durée :** 14 heures

**Mode d'organisation :** Mixte

## Contenu pédagogique

### *Public visé*

Intended primarily for people who have already used some statistical tools, whether in the context of their work in a company and/or in the context of Six Sigma projects linked to or following Green Belt or Black Belt training, and/or people who have followed one or another statistical training module such as graphic and statistical bases, design of experiment (DOE), statistical process control, etc.

It can also be followed by someone who has never used a software other than Excel but who, ideally, has some basics in statistics.

This training is given exclusively for one company (intra), either at the client's premises (2 consecutive days - max. 10 participants), or remotely (4 half-days spread over a maximum of 2 weeks).

### *Objectifs pédagogiques*

- Recall the basics of statistics
- Practice the most common graphic and statistical tools for data analysis
- Use the statistical software of your choice (Ellistat, Minitab or SigmaXL)
- Progress in the practical use of statistics and help, if necessary, with the choice of software

### *Description*

Practical use of graphical and statistical tools through a short theoretical review with examples, exercises and case studies.

Reconnaissance de formation : Attestation SMACA (accordée sous condition d'une présence minimale de 60%).

### *Contenu*

The training focuses on practical use of graphic and statistical tools with a short theoretical reminder and examples, exercises and case studies (including some real cases from the medical or pharmaceutical field) whose solutions are detailed with the commands and dialog boxes of software as well as the complete interpretation of the results.

In the last chapter, we will also give a data analysis procedure as well as tools to help choose the graphical and statistical tools to use depending on the context in which we are.

- Introduction to the software chosen for the training
- The normal distribution and its properties
- Timeline charts and stability checking
- Frequency graphs

- Scatter plots and matrix plots
- Gage R&R for continuous and discrete measurements
- Control charts (Individual and Xbar-R)
- Capability studies and the case of non-normal data
- Simple linear regression and introduction to multiple regression
- Hypothesis testing and power calculation
- Data analysis procedure, selection tools and case studies

Software of your choice :

- Ellistats
- Minitab
- SigmaXL

## *Prérequis*

Have a good foundation in descriptive statistics.

## *Modalités pédagogiques*

**Teaching methods:**

- Corrected exercises / debates / examples and interactions will allow you to fully understand the different concepts, with the help of Excel files provided via a USB key.
- A case study simulating a real case will serve as a guideline for the training.
- Use of demos, examples and simulations to provide a better understanding of some more complex statistical concepts.

**Means of evaluation :**

- Continuous evaluation during training via questioning, feedback and regular summaries.
- Use of a summary produced with the participants at the start of the second day of training or the various remote sessions.