

Trainings from Ippon Learning

We can prepare custom trainings on the following topics

- Measurement Systems Analysis MSA
- Design of Experiments DOE
- Statistical Process Control SPC
- Inferential Statistics and Modeling
- Reliability
- Statistics with the JMP software
- Machine Learning and Data Science

Our Six Sigma training in six days includes most of previous topics.

1. Six Sigma Green Belt

Duration: 6 days

Pre-requisite: a computer with JMP software, basic knowledge of statistics and computing Maximum number of trainees: 8.

- Training Part 1 (3 days)
 - Introduction
 - Foundations of Six Sigma
 - Shewhart and Deming
 - Juran and Taguchi
 - Motorola and GE
 - DMAIC, DMADV, Lean and differences with other methods
 - Define: definition of the project
 - Voice of the customer, voice of the business
 - Team charter
 - SIPOC
 - Quick wins
 - Measure: implementing the right metrics
 - Operational definitions
 - Metrology
 - Key concepts
 - Uncertainty
 - Calibration
 - Gage R&R
 - Choice of the right "y variables"
 - Process capability
 - Normality
 - Process mappings
 - Training Part 2 (3 days)
 - Statistical tools

- Confidence interval
 - Principle of inference
 - Confidence interval calculations for normal data
 - Applications
 - Statistical tests
 - t-test
 - ANOVA



- Alpha and Beta risk
- How to manage lack of normality: non-parametric tests
- Applications
- Statistical modeling
 - Data cleaning
 - Simple regression
 - Multiple regression
- Improve: implementing selected solutions
 - Introduction to design of experiment
 - The principle of orthogonality
 - 5 phases of a DOE
 - Design generation
 - Full factorial
 - Fractional designs
 - Screening designs
 - Analysis of a design: Multifactor ANOVA
 - Communication and pilot production
 - Control: maintaining the performance
 - Introduction to FMEA
 - Statistical Process Control
 - Principle of a control chart
 - Mains charts
 - I charts
 - Xbar charts
 - Managing the SPC
- Conclusion
- Green Belt test

Case studies and exercises with a statistical software will be done all along the training.

2. Six Sigma for Managers & Champions

The goal of this training is to introduce six sigma to the managers. It is not a detailed technical training but it is very important for the manager to understand the key concepts: statistical and methodological (DMAIC). Also, an important part of this training is the project selection and sponsoring.

Duration is one day.

Pre-requisite: for project selection, Managers should come with a list of potential projects.

- Introduction
 - DMAIC, DMADV and Lean
 - Examples of successful projects
- Define: definition of the project
 - Voice of the customer
 - Voice of the business,
- Measure: implementing the right metrics
 - Operational definitions and metrology, including gage capability and calibrations
 - Choice of the right "y variables"
- Analyze: finding the root cause
 - Quality tools review
 - Statistical tools review
- Improve: implementing selected solutions
 - Creativity methods and introduction to design of experiment



- Communication and pilot production
- Control: maintaining the performance
 - Introduction to FMEA, control plan
 - Statistical Process Control
- Project selection (0.5 days)

- Criteria for successful projects
- Live selection of projects using ippon template