MATRİS DANIŞMANLIK

Black Belt Training

Lean Six Sigma Black Belt Training

- Training includes implementing and managing a process or product improvement project, to make decisions, necessary methodology to solve problems, all process analysis and improvement methods and statistical tools.

- Also, project management, leadership, decision-making and communication skills and analytical thinking skills of Black Belts are developed with in-class practices in training.

- Black Belts are expected to carry out a project that will provide real and financial returns during their training and therefore their success can be evaluated in monetary terms. Project-related developments are reviewed and evaluated by the trainers at every phase and end of the training, and the necessary feedback information is shared.

LeanSixSigma

Black Belt Training

Black Belts are the practitioners of methodology within the Six Sigma Management System, the problem-solver experts and pioneers of cultural transformation targeting excellent processes.

Training includes all methods and tools for Six Sigma Black Belt project management, problem solving, process analysis and improvement and statistics. By in-class practices, it is aimed to improve project management, leadership, decision making, communications and analytical thinking skills of Black Belt candidates.

Black Belt training consists of 5 modules spread over five months. Total training days in five months are 23. (3+5+5+5+5)

Black Belt candidates are required to participate the training with a true project from their business environment, success of which will be able to be measured by the financial impact of the project. Between each week of training, Black Belt candidates return to their business environments to apply the tools and methods learned in class. Progress of the projects is reviewed by MATRIS trainers at each training week and feedback is shared in the class.

Candidates who can demonstrate required skills during in-class practices, at intermediate exams at the end of each training module, at the final exam after the training and who can successfully complete first project deserves the *"**Successful Black Belt Certificate**"*.
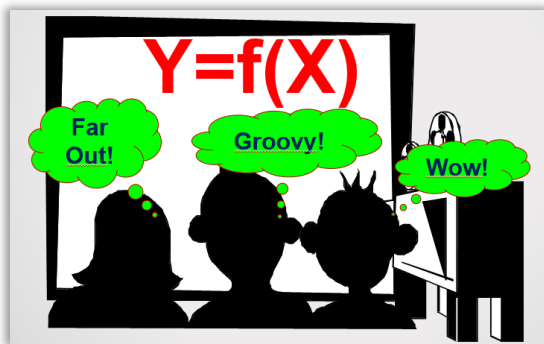
"Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write"

H. G. Wells

Training Duration: *23 days*

Who Can Participate: *Employees who are experienced, respected, have leadership qualities, are dynamic and have been assigned a real project by their organization.*

Required Hardware: *Laptop*

Required Software: *Microsoft Office applications and Minitab 21*

Define Phase (3 days):

- Introduction to Minitab

- Basic Statistics

- Lean Six Sigma and DMAIC Methodology

- Infrastructure - Roles and Responsibilities

- Project Selection and Definiton

- Creation of the Project Team

- Process Metrics – VOC

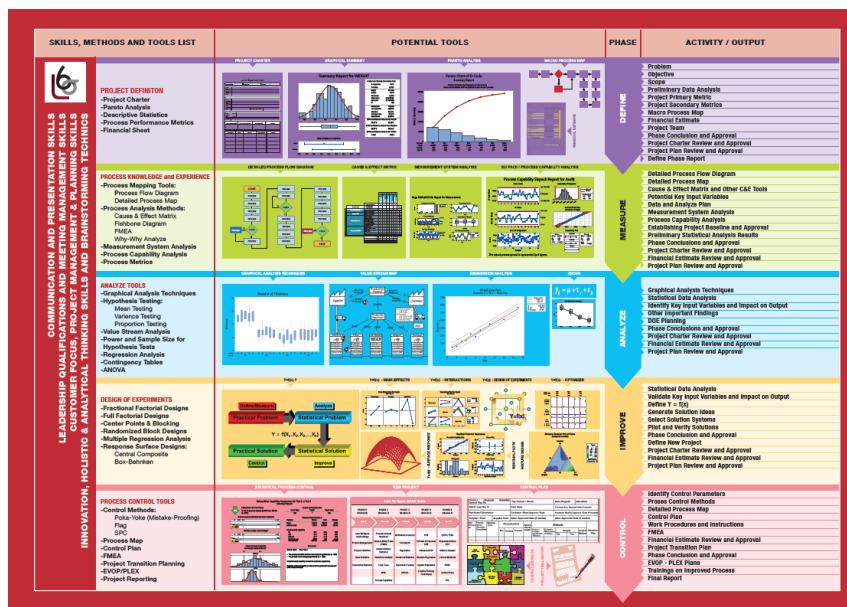- Project Management

- Introduction to Presentation Skills

Virtual Classroom and Exercises

DMAIC Simulation

Project Prioritization Simulation

Project Planning Simulation

Presentation Practices

DMAIC Guide

2021

LEANSIXSIGMA

Measure Phase (5 days):

- Project Presentations and Project Progress

- Graphical Analysis Techniques -I-

- Advanced Basic Statistics

- Process Flow Chart and Process Map

- Value Stream Mapping

- Process Analysis – Lean Techniques

- Value Stream Analysis

- 5S & Visual Plant

- Cause and Effect Tools

- Measurement Systems Analysis

- Process Capability Analysis

- Leadership:
    - o Effective Communication
    - o Change Management
    - o Conflict Management

- Process Capability Simulation

Virtual Classroom and Exercises

Process Mapping Simulation

Value Stream Analysis Simulation

*Cause/Effect Tools Simulations*

MSA Simulations

Process Capability Simulation

Communication Case Study

Analysis Phase (5 days):

- Project Presentations and Project Progress

- Graphical Analysis Tools -II-

- Central Limit Theorem

- Confidence Intervals

- Hypothesis Testing

   o **Means**

   o **Variances**

   o **Proportions**

o Sample Sizes for Hypothesis Tests

o Correlation & Regression Analysis

o One-Way ANOVA

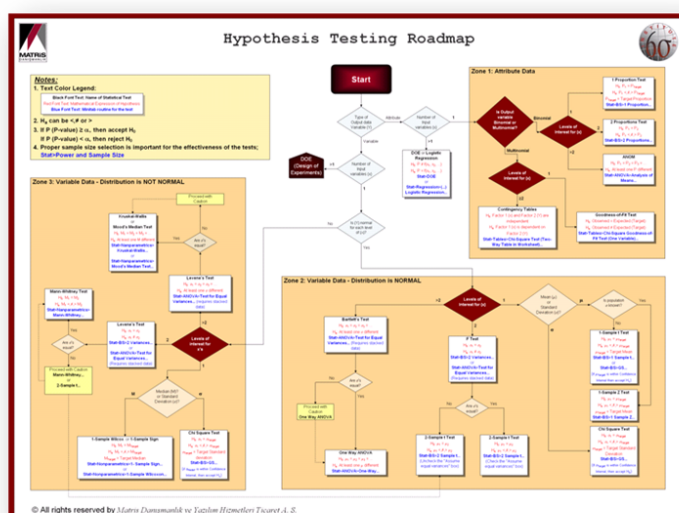o Chi-Square Tests and Contingency Tables

o Regression Simulation
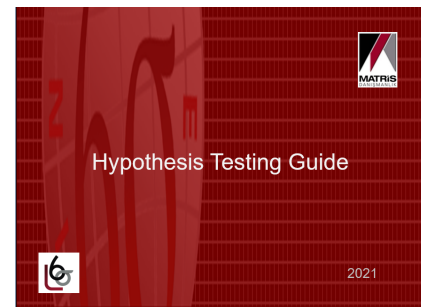
Virtual Classroom and Exercises

*Hypothesis Testing Case Study*

Effect of Sample Size Simulation

Regression Analysis Simulation

Improve Phase (5 days):

- Project Presentations and Project Progress

- Analysis of Variability – ANOVA

- Kaizen

- SMED

- Introduction to DOE

- Full Factorial Experiment Designs

- 2^k Factorial Experiments - Center Points and Blocking

- Fractional Factorial Experiment Designs

- Generation and Selection of Solutions

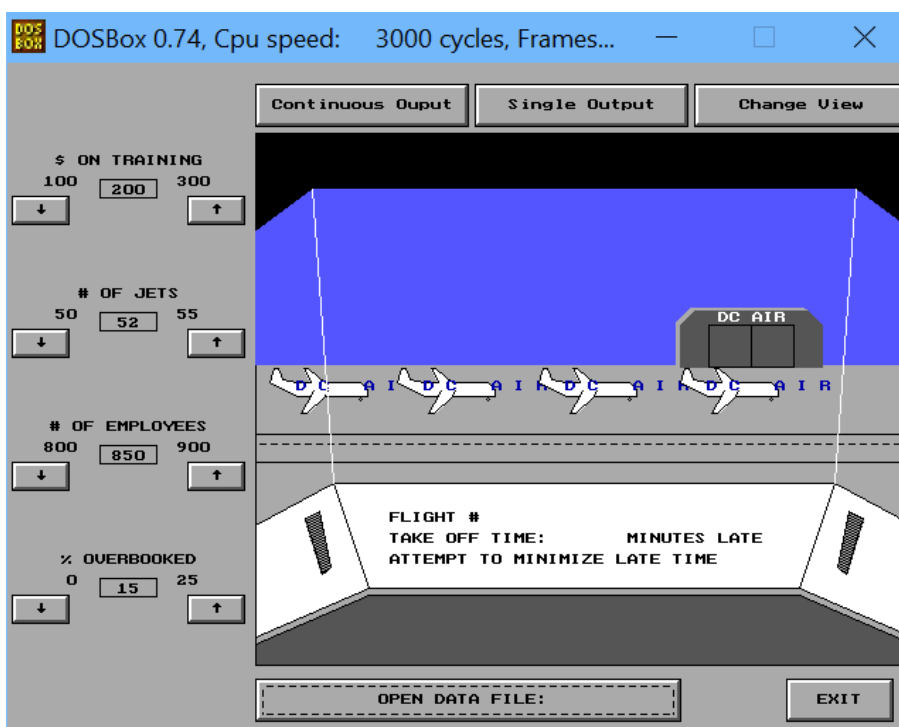- Project Management & Communication Skills

- DOE Simulation

DOE (Design of Experiments) Guide

2021
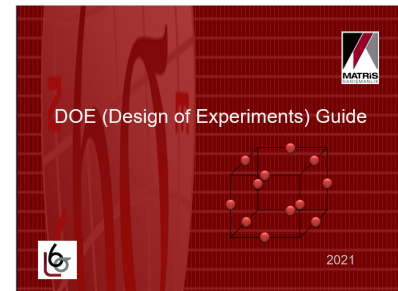
Virtual Classroom and Exercises

DOE Case Studies

DOE Simulation (Software)

DOE Simulation (Catapult)

Communication Case Study

Control Phase (5 days):

- Project Presentations and Project Progress

- Experiment Design

- Multiple Regression

- Logistic Regression

- Response Surface Designs

- EVOP/PLEX

- Control Methods

- Control Plans and FMEA

- Statistical Process Control

    o **Varriable**

    o **Attribute**

- Closing The Project

Virtual Classroom and Exercises

EVOP Case Study

Control Plan Case Study