



Certificate

Executive Education Program

We hereby confirm that

Milap Kumar Mahavar

has successfully completed the certification requirements for the

TUM Lean Six Sigma Yellow Belt

through the successful completion of the 22-week Professional Series of courses on the edX platform, including 30 hours of lecture, weekly quizzes, and guided on-line case studies and projects,

Six Sigma and Lean: Quantitative Tools for Quality and Productivity

Covering the topics

LEAN

- History of Lean
- Continuous Improvement (Kaizen)
- 8D Problem Solving
- Value Stream Mapping
- Fishbone, 5 Whys, Cause & Effect
- 3Ms: Mura, Muri, Muda
 7 Wastes of Lean
- Poka Yoke Solutions
- Visual Management
- Workplace Organization 5S
- · Capacity Analysis, Littles Law
- Queuing Theory
- · Setups and Batches
- Mixed Model production
- JIT/Pull Systems
- Scheduling Pull Systems

SIX SIGMA

- Project Identification and Definition
- SIPOC
- Customer Expectations, VOC, Kano
- Critical-to-Quality Parameters
- Process Mapping/ Flow Diagram
- MSA, Gage R&R,
- Probability Distributions
- · Sampling plans
- Descriptive Statistics
- Plots (Pareto, Scatter, Time Series)
- Process Capability: Yield, ppm, DPMO, Sigma Level
- Inductive Statistics: Confidence Intervals, Hypothesis Testing
- Linear Regression/ ANOVA
- Design of Experiment
- · Failure Mode and Effect Analysis

Certification Date: November 2020

TUMLSSYB certificate no: 2098651-73576

Prof. Dr. Christoph Kaserer Academic Director Customized and Open Programs TUM School of Management

Dr. Vaxor

Prof. Dr. Martin Grunow Chair, Production and Supply Chain Management TUM School of Management Prof. Dr. Holly Ott Senior Lecturer TUM School of Management Professor Rosenheim Technical University of Applied Sciences Kar ahole

Dr. Reiner Hutwelker Six Sigma Master Black Belt TUM School of Management