Certificate

Executive Education Program

We hereby confirm that

Vuong V. Trinh

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
- Kanban
- Total Productive Maintenance
- Single Minute Exchange of Die
- Overall Equipment Effectiveness

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
- SPC, Control Charts
- Control and Response Plan
- Design for Six Sigma
- Tolerance Design

Certification Date: November 2018
TUMLSSYB certificate no: EEC_2019000835

Prof. Dr. Christoph Kaserer	Prof. Dr. Martin Grunow	Prof. Dr. Holly Ott	Dr. Reiner Hutwelker
Academic Director Customized and Open Programs TUM School of Management	Chair, Production and Supply Chain Management TUM School of Management	Senior Lecturer TUM School of Management Professor Hochschule der Bayerischen Wirtschaft	Six Sigma Master Black Belt