



NORTHERN ILLINOIS UNIVERSITY

**College of Engineering
and Engineering Technology**

Bridging Theory with Practice

Yellow and Green Belt Certification in Lean Six Sigma

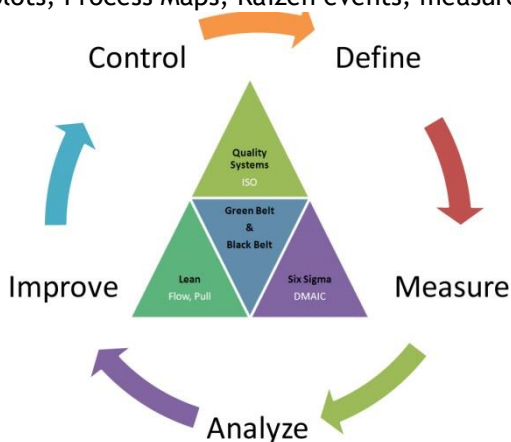
A certificate in Lean Six Sigma prepares you to eliminate waste or inefficiency in your workplace. Specifically, the certificates address how managerial employees can rid their systems of Defects, Overproduction, Transportation, Waiting, Inventory, Motion, and Overprocessing as it applies to engineering concepts.

If you are a professional working in a hospital, a manufacturing facility, or any service industry, a certificate in Lean Six Sigma helps you learn the tools necessary to undertake continuous improvement projects aimed at reducing and eliminating waste, reducing project variations, improving customer satisfaction, and increasing your organization's bottom line.

The College of Engineering & Engineering offers three certificates in Lean Six Sigma

Yellow Belt: two-day course

Lean: VSM, 5S, Mistake-proofing, Pull Systems, Little's Law, SMED, Takt time, PDCA, Fishbone, Scatter plots, Process Maps, Kaizen events, measurements, Continuous Improvement



Quality Systems: QMS requirements, ISO, Steps to ISO Certification

Green Belt: four-day course, after completing Yellow Belt

Lean Define, Measure, Analyze, Improve, and Control (DMAIC) methodology and the tools that can be applied in each phase. Participants receive a certificate after successfully completing a project reviewed by a panel of judges.

- **Define:** Origins of Six Sigma, SMART problem/goal statement, CTQ tree, SIPOC, Pareto Analysis, Stakeholder Analysis, COPQ, Project Charter.
- **Measure:** Process Maps, Cause and Effect diagrams, Measures and Metrics (DPU, FPY, DPMO, KPI Trees, Location and Spread, Sampling, MSA, MSA Drill down, Gage R&R, Cp, Cpk, IMR and Run Charts
- **Analyze:** Source of Variation, ANOVA, Simple Linear Regression, DoE
- **Improve:** Affinity Diagrams, FMEA, Cost benefit Analysis, Solution Selection
- **Control:** Project Management, Change Management, Control Plans, Poka - Yoke, Control Charts, Dashboard tracking, Documentation

Participants are required to complete a small project and present the project findings to a panel of judges in order to obtain a green belt. Depending upon your availability and the nature of the support that one receives from the organization in which the project is conducted, it could take anywhere from three to four months to complete the project.

Black Belt: three-day course, after completing Green Belt

DMAIC overview, DMADV, VOC, QFD, Kano Analysis, Advanced DOE, Multiple Regression, Soft Skills.

Why Six Sigma at NIU

- Modules are taught by knowledgeable faculty members and Master Black Belts who are currently working in large corporations
- Flexible and convenient course options, such as weekends and evenings
- On-site training available to groups of 15 or more
- Face to face course delivery