Innovative processes can deliver growth and profit, but what about the outdated processes that slow you down?

Process is the lifeblood of business. When results are not satisfactory, change is required. The powerful, proven tools of lean and six sigma help diagnose and fix issues and create new, innovative processes. Rensselaer’s Graduate Certificate in Lean Quality in Production prepares you with these methodologies to fix existing processes and create new ones you can count on.

The Lean Quality in Production Certificate consists of:

- **ENGR 6230: Lean Six Sigma I**
  Learn the fundamentals of Lean and Six Sigma and apply them to a relevant workplace process. The Define, Measure, Analyze, Interpret, and Control (DMAIC) improvement cycle along with voice of customer (VOC), quality functional deployment (QFD), 5S, Kaizens, and plan-do-check-act (PDCA) are put into practice.

- **ENGR 6231: Lean Six Sigma II**
  Building on your DMAIC experience, identify new, high-value processes and learn to create them with the Define, Measure, Analyze, Design, Optimize and Verify (DMADOV) approach, along with data collection and statistical methods for design of experiments (DOE), root cause analysis, and KPIs.

- **ISYE 6970: Professional Project**
  Continue with DMADOV to Design a new process, Optimize it, and Verify (DOV) so that the design meets quality standards. Use factorial design, optimization with robust design principles and the Taguchi loss function, and verify process performance with functional degradation testing and a control plan.

Explore Rensselaer’s Education for Working Professionals program at a 30-minute Informational Webinar or schedule a Professional Consultation at [ewp.rpi.edu/contactus](http://ewp.rpi.edu/contactus). You can also reach us by email at [ewp@rpi.edu](mailto:ewp@rpi.edu) or by phone at 860.548.2403.
Lean Quality in Production

is one of eight graduate certificates that allow you to develop in-depth expertise quickly in a mission-critical area.

Visit ewp.rpi.edu for an updated listing of certificates offered and program course descriptions.

MANAGING
TECHNICAL
ORGANIZATIONS

LEADING
CHANGE and
INNOVATION

Prepares you to add more value to your work and employer as you practice dynamic organization leadership while understanding markets, developing strategy and people, and evaluating performance.

Transform your approach at work as you develop purposeful and intentional leadership needed when facilitating change that is clear and precise while minimizing uncertainty and unintended consequences.

BUSINESS
INTELLIGENCE

PRODUCTION
ANALYTICS

MACHINE
LEARNING and A.I.

Take control of the flood of data from across the enterprise by mastering data-driven decision making, business intelligence analysis, while modeling findings you and your employer can rely on.

Model your production accurately using data, logistics analysis and modeling decisions to differentiate true intelligence from ‘hunches’, unknowns into knowns, and make the best use of data possible.

A massive competitive advantage, develop expertise in data architecture, machine learning frameworks, and deep learning in AI systems to identify problems before they appear and get closer to your customers.

SUPPLY CHAIN
and LOGISTICS

SYSTEMS
ENGINEERING

LEAN QUALITY
in PRODUCTION

Empower your operation by ensuring suppliers are capable, inventory is managed, distribution and warehousing logistics are in order, and the software integrating planning and operations works harmoniously.

See the ‘whole picture’ of your organization, develop skills to optimize systems and processes to bring costs and inventory under control, and enhance your role in moving the organization forward.

Design and optimize complex systems and upgrade your credentials as a Lean Six Sigma I and Lean Six Sigma II practitioner who replaces slow, outdated processes with an approach you can count on.

Graduate Certificates can be stacked to form custom Rensselaer master’s degrees.

Rensselaer offers two master’s degrees that can be customized with your choice of certificates.

Explore Rensselaer’s Education for Working Professionals program at ewp.rpi.edu.

MASTER of
SCIENCE in
ENGINEERING
SCIENCE

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Stack any three certificates of your choice to complete a Master of Science in Engineering Science degree with a final, integrative project.

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