Description
In this 3 credit, 15-week online graduate course, you will address inherent variability and waste present in both production and supply chain systems within your own company. Applications covered include value stream mapping, production and supply chain performance metrics, system performance improvement plans, and the management of information and material flows.

Projects

Project 1: Value Stream Mapping a Production System
Use the Value Stream Mapping technique to analyze material and information flow within your production system. Depict the current state of the system, its performance baseline, and identify sources of waste and variability.

Project 2: Production System Redesign
Integrate Lean production principles (level loading, pull systems, work cells, etc.) to reduce waste and variability in your production system to achieve improved system performance.

Project 3: Supply Chain Value Stream Mapping
Extend the value stream map to your product’s external supply chain. Identify sources of waste and variability in the broader system by investigating processing, lead time, transport time, and inventory levels.

Project 4: Supply Chain Redesign
Integrate Lean supply chain principles (leveling, frequent transport, pull systems, co-location) to reduce waste and variability in the supply chain to achieve improved system performance.

Outcomes
Completion of the course enables you to:

- Identify opportunities to reduce non-value added work, throughput times, and inventory with Value Stream Mapping
- Use Lean production and supply chain principles to improve material and information flows in a production and supply chain system
- Unify local production systems with the overall supply chain through extended Value Stream Mapping
- Establish a vision for the desired future state of production systems and supply chains to more effectively meet customer demands

Features and Technology
This course is offered through the RensselaerStudio, providing ease of access to all course technologies and software required, anytime, anywhere. Live, synchronous sessions are held every few weeks via Zoom. Sessions are designed to cultivate your understanding of course concepts and guide your approach as you gain insights from others’ experience.