In this three-credit, 15-week online graduate course, complete the Design for Six Sigma (DFSS) project started in Lean Six Sigma II. In this course, you conclude your new process design at work by completing the last three phases of the Define, Measure, Analyze, Design, Optimize and Verify (DMADOV) framework.

Use Design of Experiments (DOE) and the Plan-Do-Check-Act (PDCA) process to validate your recommendations. Conclude with a leadership presentation outlining the value proposition of your process change.

**Outcomes**

Completion of the course enables you to:

- Create a new process deployment strategy and implementation plan
- Use the Taguchi method to statistically develop a robust process design
- Benchmark the new process using an 8-step approach
- Apply process control to reduce the risk of mistakes and process weakness
- Run a pilot study for the new process design, including creation of a working prototype
- Effectively promote your proposed changes to a virtual audience

**Technology**

This course is offered through the Rensselaer Studio, providing ease of access to all course technologies and software required, any time, anywhere. Synchronous sessions are held via Zoom.

**Description**

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**Project**

**Phase 1: Design**

Choose an appropriate model through factorial and screening design. Assess current state knowledge by creating a function tree and Value-Stream Map to strategize & generate your design selection.

**Phase 2: Optimize**

Utilize Robust Design practices to optimize your process. Understand tolerance design, perform the Quality Loss Function and follow necessary steps in Parameter Design to establish a solution with the highest quality output for the lowest cost.

**Phase 3: Verify**

Apply the PDCA verification method to pilot your solution. Prototype and apply the Build-Test-Fix process to validate your predictions and identify any decision errors. Conduct a Functional Degradation Test (FDT) to close the loop with the customer, then establish your Control Plan. Deliver a leadership presentation outlining the value of your proposed changes to finalize the project.

**Features**

Live, online synchronous sessions with the instructor and professionals from various industries are scheduled every 2-3 weeks throughout the semester. These sessions are designed to cultivate your understanding of course concepts and guide your approach as you gain insights from others.