



# Rensselaer

why not change the world?®

Education for Working Professionals

## Systems Engineering Graduate Certificate

### Every organization has systems and processes—are those systems and processes performing flawlessly?

Remaining competitive today becomes increasingly difficult with complex global supply chains, just-in-time inventory management, and new manufacturing techniques. Engineering and business leaders with the right systems engineering tools know how to evaluate systems and processes to ensure they are optimized and achieve strategic objectives. Systems Engineers see the “whole picture” and work with stakeholders to improve performance—evaluating, optimizing, and becoming a change agent to move the organization forward. Rensselaer’s Systems Engineering Graduate Certificate prepares you to get costs and inventory under control and enhance your organization’s competitive advantage.

### The Systems Engineering Certificate is comprised of three courses:

- **ENGR 6100: Business Issues for Engineers and Scientists**

Investigate the underlying business model in new ventures or within an existing enterprise, including competitive market analysis, the value proposition, beating the competition, financial performance, strategy formulation, and implementation.

- **ISYE 6610: Systems Modeling in Decision Sciences**

Model systems using linear programming, integer programming, multi-criteria decision-making, and decision analysis. Use computational tools to evaluate systems and make actionable decisions to improve system performance.

- **ISYE 6620: Discrete Event Simulation**

Use simulation modeling and analysis techniques to evaluate system performance, using graphical simulation modeling, animation techniques, large-scale and complex systems models, pseudo-random number and random variate generation, input and output modeling, sensitivity analysis, and interactive simulation-based decision-support systems.

You’re invited to explore this and other Rensselaer graduate programs and certificates for working professionals. Please let us know your interest via email at [ewp@rpi.edu](mailto:ewp@rpi.edu) or phone at 860.548.2403. You’re also welcome to join Dean Aric Krause for an Informational Webinar of your choice. Find the webinar schedule at [ewp.rpi.edu](http://ewp.rpi.edu). We look forward to meeting you!

### Quick Facts

Begin the certificate in January, May, or August.

Certificate can be completed in 7 months or at a pace that suits you.

Each course is 3 credit hours and the certificate totals 9.

The certificate’s blended online delivery reflects today’s dynamic workplace.

Experienced practitioner faculty guide the completion of project work related to your career objectives.

The outcomes of your projects will highlight your expertise in business intelligence.

Work and learn with other professionals from a wide variety of industries in the certificate program.

Certificates can count towards the completion of graduate degrees designed for your specific needs.

Application details and important dates can be found at:  
[ewp.rpi.edu](http://ewp.rpi.edu)