ISYE 3150: Design & Improvement of Quality Processes

3 Credit Hours

Prerequisite: Engineering Standing

Students will learn quality history, philosophies, and the relationship of quality to organizational performance. Emphasis will be given to the management, organization, creation and evaluation of quality systems necessary to assure organizational performance, including basic quality tools, and approaches to quality and process improvement such as Lean and Six Sigma.

ISYE 3200: Human Machine Systems

3 Credit Hours

Prerequisite: Engineering Standing

In this course students will study the relationship between humans and the systems they interact with. Students will study human physical and psychological strengths and weaknesses as well as organizational and political issues that influence the effectiveness of Human Machine interactions.

ISYE 3300: System Dynamics and System Thinking

3 Credit Hours

Prerequisite: Engineering Standing and ISYE 2600

The course focuses on system dynamics modeling skills to be applied to complex socio-technical systems. The course provides the conceptual and technical knowledge necessary to conceptualize dynamic policy problems, formulate appropriate simulation models, and use models to understand socio-technical systems and develop effective policy interventions. A principle focus of the course is the significance of information feedback and circular causality in the behavior of social systems.

ISYE 3350: Logistics & Supply Chain Systems

3 Credit Hours

Prerequisite: Engineering Standing

This course is an analysis of decision making in the current logistics environment and the tools and optimization models needed for finding solutions to problems relating to supply chain design and strategy, transportation, and warehouse management.