ISYE 4200: Engineering Optimization: Stochastic Decision Models

3 Credit Hours

Prerequisite: (ISYE 3400 or MATH 3272) and (ISYE 2600 or STAT 2332 or MATH 3332) and MATH 2202

Modeling and solution of decision problems under uncertainty. Topics include Markov Chains, stochastic programming, stochastic dynamic programming, theory, utility theory and simulation. Computer solution techniques are emphasized.

ISYE 4250: Manufacturing & Service Systems

3 Credit Hours

Prerequisite: Engineering Standing

An analysis of decision making in the current production environment and the tools and optimization models needed for finding solutions to problems relating to production planning and scheduling, inventory, and warehouse design.

ISYE 4320: Advanced Logistics

3 Credit Hours

Prerequisite: ISYE 3350 and Engineering Standing

This course will expand on the topics covered in the introductory logistics course, leading students to a deeper understanding of logistics and supply chain systems. Special emphasis will be given to current trends in the field, such as global logistics, reverse logistics, nontraditional supply chains, and risk assessment/disaster recovery. Each student will also research in more depth a single topic that interests them.

ISYE 4400: Directed Study

1-4 Variable Credit Hours

Prerequisite: Approval of instructor and department chair.

This course covers special topics and seminars of an advanced nature, external to regular course offerings that allow a student to work individually with an instructor. A Directed Study may include original research projects and/or practicum experiences.