

Program Options

The following is necessary to fulfill the requirements of an option:

- Complete courses in an option area using either professional electives (PE) or open electives (see list of approved courses within each option below)

The Ergonomics Program Option allows for further study in the design of systems with respect to biomechanical, physiological and cognitive human capabilities, and how to best integrate humans within systems.

Ergonomics/Human Factors Option (Complete three courses)	
ISEE-730	Biomechanics
ISEE-731	Advanced Topics in Ergo/HF
ISEE-732	Systems Safety Engineering
ISEE-734	Graduate Engineering Psychology
ISEE-760	Design of Experiments

The Supply Chain Management Program Option provides further study in the design, planning, execution, control, and monitoring of distribution and logistics activities with the objective of ensuring the cost-effective delivery of products and services globally.

Supply Chain Management (Complete three courses)	
ISEE-703	Supply Chain Management
ISEE-704	Logistics Management
ISEE-708	Simulation Analysis OR ISEE-711 Advanced Simulation (can only count 1 toward option)
ISEE-720	Production Control

The Manufacturing Program Option allows for advanced learning in how products can be manufactured, assembled, maintained, and ultimately disassembled in safe, efficient, cost effective, and environmentally acceptable ways.

Manufacturing Option (Complete three courses)	
ISEE-626	Lean System Design
ISEE-640	Computer-Aided Design and Manufacturing
ISEE-740	Design for Manufacture and Assembly
ISEE-741	3D Printing
ISEE-742	Metal and Composite Additive Manufacturing
ISEE-743	Personalized 3D Printing
ISEE-787	Design for Environment

The Lean Six Sigma Program Option allow students to further expand their learning of industry-recognized skills to streamline processes, improve product quality, reduce waste and increase competitive advantage. This program option focuses on the integration and application of process and quality methodologies.

Lean Six-Sigma Option (Complete three courses)	
ISEE-582	Lean Six Sigma Fundamentals
ISEE-626	Lean System Design
ISEE-728	Production Systems Management
ISEE-760	Design of Experiments