Industrial Engineering, PhD
Additional Course Requirements (Deficiency Courses)

Courses equivalent to assigned additional course requirements (deficiency courses) must be completed with a grade of "C" or better at the undergraduate level to satisfy the requirements. A grade of "B" or better is required for all assigned additional course requirements (deficiency courses) at the post-baccalaureate level.

CSE 110 PRINCIPLES OF PROGRAMMING

Concepts of problem solving using an object-oriented programming language, algorithm design, structured programming, fundamental algorithms and techniques.

CSE 205 OBJECT-ORIENTED PROGRAM AND DATA STRUCTURES

Problem solving by programming with an object-oriented programming language. Introduction to data structures. Overview of computer science topics.

Prerequisite: CSE 110

MAT 242 ELEMENTARY LINEAR ALGEBRA

Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.

Prerequisite: MAT 210, MAT 251, MAT 265 or MAT 270

IEE 376 OPERATIONS RESEARCH DETERMINISTIC TECHNIQUES/APPLICATIONS

Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.

Prerequisites: MAT 242 or MAT 342 or MAT 343; and CSE 205

IEE 380 PROBABILITY AND STATISTICS FOR ENGINEERING PROBLEM SOLVING

Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems.

Prerequisite: MAT 266 or MAT 271

IEE 470 STOCHASTIC OPERATIONS RESEARCH

Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.

Prerequisites: IEE 376 and IEE 380