

### **ISYE 3398: Internship**

#### **1-4 Credit Hours**

*Prerequisite: Engineering Standing, Minimum of 60 credit hours completed, Minimum internship work hours of 10 hours/week, Minimum of three ISYE learning objective identified by site supervisor, The majority of the work is ISYE related, A signed Internship Agreement form*

This is a specialized experiential learning development course that is determined by the students' needs and interests, in consultation with and under the guidance of an ISYE faculty member and site supervisor.

### **ISYE 3400: Deterministic Operations Research**

#### **3 Credit Hours**

*Prerequisite: MATH 3260*

This course covers formulation and solution of deterministic models of operations research linear, integer, and dynamic programming. Transportation, assignment, shortest path, and minimum spanning tree problems will be introduced to address various applications in the areas of engineering design, production planning and scheduling, inventory control, transportation and logistics.

### **ISYE 3450: Work Measurement Study**

#### **3 Credit Hours**

*Prerequisite: (ISYE 2600 or STAT 2332) and Engineering Standing*

An examination of the principles and practices of work analysis and work measurement. Emphasis is on a variety of analytical tools and the development of the student's skill in the use of a stopwatch. This course includes a Term Project where the student will use the concepts of human factors engineering to create an optimal work area layout that maximizes production output and achieves the quality and safety objectives of the organization and also minimizes employee fatigue. The Term Project will include the creation of an engineering time standard for the optimized process.

### **ISYE 3600: Probability and Statistics II**

#### **3 Credit Hours**

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

This course covers hypothesis testing for means, proportions and variances (one and two samples), categorical data analysis (chi-square), analysis of variance, and introduction to regression analysis, with applications to engineering problems.