INDUSTRIAL & MANAGEMENT SYSTEMS ENGINEERING (ISMG)

ISMG 2010 TECHNOLOGY AND SOCIETY (3 credits)
Understanding technology and its impact on society. (Intended for students majoring in areas other than engineering and science.)
Prerequisite(s)/Corequisite(s): Sophomore standing, not open to nondegree students

ISMG 3150 INTRODUCTION TO ERGONOMICS (3 credits)
Analysis and design of work systems considering human capabilities and limitations, human anatomy and physiology, interacting with physical environment, and occupational safety and health. Overview of physical ergonomics, safety, hygiene, and cognitive ergonomics.
Prerequisite(s)/Corequisite(s): ISMG2500

ISMG 3280 DETERMINISTIC OPER RSRCH MDLS (3 credits)
Application of deterministic operations research techniques: linear programming, transportation problems, assignment problems, integer programming. Model formulation and problem solving using a computer package.

ISMG 4060 DECISION AND RISK ANALYSIS (3 credits)
Theory and practice of decision making under uncertainty. Graphical modeling techniques including influence diagram and decision trees. The value of information. Utility theory foundations, risk preference, and multi-attribute decision modes. Economic justification or projects. (Cross-listed with ISMG8066)
Prerequisite(s)/Corequisite(s): ISMG 2060; STAT 3800 or STAT 8805 or ISMG 3210

ISMG 4120 OCCUP SAFETY-SYSTEMS ANALYSIS (3 credits)
Analysis of safety performance, attribution of cost, identification and analysis of accident potential. Fault Tree analysis. Systems safety and reliability. (Cross-listed with ISMG8126)
Prerequisite(s)/Corequisite(s): ISMG3210

ISMG 4710 TOOL AND DIE DESIGN (3 credits)
General consideration in tool designing, design of tool and workholding devices, forming machines and presswork tools; application of computer graphics and finite element techniques, and prediction of tool paths in CNC machines.
Prerequisite(s)/Corequisite(s): ISMG3700, not open to nondegree students