IMSE Electives

Course	Course Title and Description	Fall	Spring	Summer
EIN 4385	**Management of Technical Change** We accept that technology changes can impact your business but the acceptance of the employees of such changes will be critical to achieving the benefits expected. This course focuses on the tools to achieve successful change.	X		
EIN 4180	**Principles of Engineering Management** Emphasis is placed on management practice in an engineering-intensive context. Topics include management theory, planning and control, strategic management, organizing, ethics, leadership, innovation and change, and communication skills.	X	X	
EIN 4173	**Quality Management Systems** This course presents a study of the functions and responsibilities of the quality organization. Tools for continuous improvement are analyzed for sequence of use and application. Special attention will be given to the process problems that underlie the implementation of TQM and Total Quality, including the Baldrige Criteria for Performance Excellence, the ISO 9000 Quality Management System, and Six Sigma methodologies.	X*	X*	
EIN 4326	**Engineering the Supply Chain** In this course, students learn tools to design supply chain networks considering all drivers which include: facilities, transportation, inventory, information, sourcing and pricing. They learn techniques to support the design, planning and operational decisions within the supply chain.	X		
EIN 4172	**ISO9000/14000** Analysis of ISO 9000 and ISO 14000 publications with a view towards Understanding the documentation process and auditing for registration purposes and the relationship to the quality systems and programs.			X
EIN 4451	**Lean Six Sigma** A presentation of Lean Six Sigma, what it is, details of the tools and methodology that comprise it, and how it relates to the Business Process Improvements.			X
EIN 4453	**Advanced Lean Six Sigma** Advanced Lean Six Sigma expands upon your initial exposure you to two of the most successful business strategies in operations: 1) the lean philosophy, as practiced at Toyota and other companies; and 2) six sigma, which was made famous by General Electric and Motorola.		X	
EIN 4213	**Engineering System Safety (shared with College of Public Health)** **Pre-Requisite: EGN 3443 Probability and Statistics.** This course will present the theory and practical implications of the concepts of system safety as these relate to the life cycle of a product or system, and analysis of the fundamental concepts, design implications, and specifications of safety in human machine environments.			X
EIN 4214	**Occupational Safety Engineering (shared with College of Public Health)** Introduction to the principles of designing, maintaining, and managing a workplace free from hazards. It covers mechanical hazards, fall and lifting hazards, climatic and environmental hazards, electrical hazards, fire and explosive hazards, and pressure hazards and considers design issues, warnings, and personal protective equipment.		X*	X*

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EIN 4933	**New Product Development (with College of Business)** The objective of this course is to develop an understanding of how to profitably create, manage and grow a new product with resource constraints. The course is designed to prepare business, engineering and entrepreneurship students to contribute to the development of strategies and tasks relevant to new product development.		X	
EIN 4142	**Project Management** In a multidisciplinary team environment, students use Microsoft Project to plan, control, and forecast various types of engineering projects and manage unexpected situations. Earned Value Management tools are also covered.			X
EIN 4200 *applies as FKL reqmt only*	**Creativity in Technology** We are born creative and somewhere along the way we learn to suppress this capability. This course is designed to aid in re-opening the creativity within ourselves so that each life can be a "work of art."	X		

* = not offered every Spring, Fall or Summer