

Engineering Management (EMGT) Courses

EMGT5005 New Product Development

The focus of this course comprises the factors to be considered when developing new products and/or technologies. Topics include the development of new product strategy and policy, product market strategies and market research, application of new product development processes, product development tools and metrics, and organizational issues associated with the product development process. Case studies are utilized to examine the five key phases in the NPD process, opportunity identification/selection, concept generation, concept/project evaluation, development and launch. Emphasis is placed on the role the product development/engineering manager has in leading product strategy and product development teams in the NPD process.

Offered at Online

3 Semester Credits

EMGT5010 Engineering Leadership & Innovation Management

The concepts, theory and practice in engineering leadership are introduced. Topics introduced and examined are team building, communication, leadership styles, ethical behavior, conflict resolution, and managing change as they apply in technical settings within a global business environment. Strategies to develop effective teams to achieve optimum results are examined. Methods for developing effective written and oral communication for product or process proposals are covered. Leading innovation and developing and managing creativity in the engineering design and development process is explored.

Offered at Online

3 Semester Credits

EMGT5020 Economics & Finance for Engineering Management

This course is a survey of material relevant to financial decision-making for engineering management. Topics presented include financial statements, the budgeting process, financial forecasting, and economic planning for future growth or decline. The course introduces economic models and methods used in the analysis of decision-making by engineering managers.

Prerequisite(s): DATA5100.

Offered at Online

3 Semester Credits

EMGT6010 Engineering Decision Management and Risk Analysis

This course covers the fundamentals of decision analysis and risk management with applications in engineering. Emphasis is placed on quantitative and qualitative tools (such as MS Excel Solver, Analytic Solver Platform, and decision trees). This course introduces decision modeling techniques by focusing on the development and analysis of models for a variety of engineering management problems and includes elements of decision problems and organizational use of decision analysis.

Prerequisite(s): DATA5100, EMGT5020.

Offered at Online

3 Semester Credits

EMGT6020 Engineering Management Capstone

The engineering management capstone is a team-based multidisciplinary project that addresses an engineering management problem. The project requires the integration of principles, theories, methods and tools utilized and presented in the engineering management program coursework. Students analyze, synthesize and evaluate learned knowledge and create deliverables which include a written report and oral presentation to support the solution to the project problem.

Prerequisite(s): Completion of 12 credits of Engineering Management courses.

Offered at Online

3 Semester Credits