EGR-Engineering Master’s (EGR)

EGR 501  Engineering Leadership and Strategic Change  (3 credit hours)
In the current business environment, an understanding of leadership and change management is essential to career success. The objective of this course is to provide practitioners in technical fields the knowledge to lead, align and transform the human element, individuals and teams, to achieve organizational performance excellence. The class includes both individual and collaborative (team) learning. An engineering, technical, or scientific undergraduate degree is required.

Typically offered in Fall and Spring

EGR 503  Statistical Engineering using Six Sigma DMAIC Process  (3 credit hours)
Statistical Engineering: systematic approach (Six Sigma DMAIC methodology) for improving manufacturing and business processes and products using advanced graphical and statistical methods. Defining the improvement opportunity, measurement system analysis (MSA), Failure Mode and Effects Analysis (FMEA), data collection, graphical and statistical analysis, design of experiment (DOE) methods, and statistical process control (SPC) methods. Application of statistical engineering to business and manufacturing case studies.

ST 361 or ST 370 or Entry Level Statistics
Typically offered in Fall and Spring

EGR 505  Managerial Finance for Engineers  (3 credit hours)
In the current business environment, familiarity with and appreciation of finance is essential to career success. Technically competent managers must be able to speak the common language of business and to understand how their work affects the performance of their organization. The objective of this course is to provide practitioners in technical fields the financial know-how to plan, control and make decisions that achieve organizational performance excellence. The class includes both individual and collaborative (team) learning. An engineering, technical or scientific undergraduate degree is required.

Typically offered in Fall and Spring

EGR 506  Managing New Hi Tech Product Launches  (3 credit hours)
This course covers new high-tech product development and launch from the perspective of the technical manager responsible for developing and launching new products and new lines of business within the high tech firm. Topics cover the entire spectrum of the new products development and launch process starting from concept generation and ideation and concept evaluation all the way through market testing and product launch. Each phase of the new products management process will be covered and illustrated by case studies. Students will generate a new product development and launch plan as a course project. 3 credit hours.

Requirement: Graduate standing in Engineering
Typically offered in Spring and Summer

EGR 507  Product Life Cycle Management  (3 credit hours)
This course covers the management of complex technical products during all phases of the product life cycle. It is a broad survey of all the tools needed by the technical product manager throughout the life cycle of a complex product. The course is taught with a systems approach and from the engineering manager’s viewpoint. The product life cycle includes all aspects of managing products from launch through maturity.

Requirement: Graduate standing in Engineering
Typically offered in Fall, Spring, and Summer

EGR 590  Special Topics in Engineering  (1-6 credit hours)
Discussion of special topics in engineering. Identification of various specific topics and prerequisites for each section from term to term.

Typically offered in Fall, Spring, and Summer

EGR 688  Non-Thesis Masters Continuous Registration-Half Time Registration  (1 credit hour)
For students in non-thesis master’s programs who have completed all credit hour requirements for their degree but need to maintain half-time continuous registration to complete incomplete grades, final master’s exam, etc.

Prerequisite: Master’s student
Typically offered in Fall, Spring, and Summer