

# Industrial Engineering Course Schedule – Winter 2008

edited 12/03/07

<b>Course #</b>	<b>Course Title</b>	<b>Instructor</b>	<b>Cr.</b>	<b>Days</b>	<b>Time</b>	<b>Room</b>	<b>SLN</b>
<b>IND E 315A</b>	<b>Probability/Statistics for Engr.</b>	Mastrangelo	3	TTh	10:30-11:50	HCK 132	13991
<i>Application of probability theory and statistics to engineering problems, distribution theory and discussion of particular distributions of interest in engineering, statistical estimation and data analysis. Prerequisite: either MATH 136 or MATH 307.</i>							
<b>IND E 316A</b>	<b>Design of Experiments</b>	Kapur	4	TTh	10:30-12:20	MEB 248	13992
<i>Introduction to the analysis of data from planned experiments. Analysis of variance and regression analysis with applications in engineering. Prerequisite: IND E 315. Joint with STAT 316A.</i>							
<b>IND E 321</b>	<b>Statistical Quality Control</b>	Mastrangelo	4	TTh	2:30-4:20	MEB 243	13993
<i>Design of quality control and assurance systems. Statistical Process Control (SPC) design and implementation. Control charts for attributes and variables. Process capability analysis and process improvement techniques. Statistical tolerance design. Quality management and recent developments, Prerequisite: IND E 315.</i>							
<b>IND E 411</b>	<b>Stoch. Modl &amp; Dec. Anlys.</b>	Ghate	4	MW F	9:30-10:50 9:30-11:20	MEB 242 MGH 030	13994
<i>Stochastic systems analysis applied to industrial engineering problems. Topics include: Markov chains, queueing theory, queueing applications and decision analysis. Prerequisite: IND E 315 &amp; 410.</i>							
<b>IND E 424A</b>	<b>Simulation</b>	Beamon	4	MW	2:30-4:20	MGH 044	13995
<i>Discrete-event simulation methodology emphasizing model formulation and construction with modern simulation languages and environments, statistical basis for evaluating model results, design and management of simulation projects. Application to manufacturing, retail, and service industries. Prerequisite: IND E 337 &amp; 411. IND E 411 may be taken concurrently.</i>							
<b>IND E 494A</b>	<b>Design in Manufact. Firm</b>	Storch	4	MWF F	11:30-12:20 1:30-4:20	MEB 242	13996
<i>Engineering design in manufacturing firms is presented. Topics include design methodology, concurrent engineering, and project management. Focus on the relationship between product design and manufacturing (design for production and assembly). Prerequisite: IND E 337; T C 333.</i>							
<b>IND E 499A</b>	<b>Special Projects in IE</b>	Staff	2-5	by arrangement			13998
<b>IND E 499B</b>	<b>Honors – Special Projects</b>	Staff	2-5	by arrangement			13999

<b>IND E 524B</b>	<b>Robust Design/Quality Engr.</b>	Kapur	3	TTh	2:30-3:50	LOW 216	14000
<i>Introduction to robust design and quality engineering. Applications of design of experiments for product and process design optimization. Experimental design using orthogonal arrays and linear graphs. System models using Chebyshev's orthogonal polynomials. Robustness in design and quality improvement for complex systems including Taguchi methods for quality engineering. Prerequisite: IND E 316 or equivalent. Also offered through EDGE.</i>							
<b>IND E 551</b>	<b>Dynamic Enterprise Modeling</b>	Brayman	3	MW	4:30-5:50	MEB 234	18752
<i>Introduces practical techniques for modeling, analyzing, and implementing real-time enterprise control systems in application areas such as manufacturing, supply chain flow control, and logistics decision schemas. Uses basic mathematical tools supported with a symbolic algebra software tool. Requires basic computer skills.</i>							
<b>IND E 566</b>	<b>Intro. to Ergonomics</b>	Johnson	3	Th	9:30-12:20	HST T498	14005
<i>Basic principles of ergonomics in work environment applied to problems of worker and management. Topics include measurement of physical work capacity, problems of fatigue and heat stress, applied biomechanics, worker-machine interactions and communication, design of displays and controls. Prerequisite: basic human physiology or permission of instructor. Joint with ENV H 566</i>							
<b>IND E 592A</b>	<b>IE Graduate Seminar</b>	Kapur	1	T	1:30-2:20	MEB 243	14006
<i>Credit/no credit only. Topics of current interest in industrial engineering. Prerequisite: graduate standing in Industrial Engineering or permission of instructor.</i>							
<b>IND E 599E</b>	<b>Special Topics in IE</b>	Staff	1-5	by arrangement			14007
<b>IND E 599F</b>	<b>GISE</b>	Mastrangelo	6	F		LOW 106	14008
<b>IND E 600A</b>	<b>Independent Study/Research</b>	Staff	1-10	by arrangement			14010
<b>IND E 700A</b>	<b>Master's Thesis</b>	Staff	1-10	by arrangement			14011
<b>IND E 800A</b>	<b>Doctoral Dissertation</b>	Staff	1-10	by arrangement			14012