

Industrial Engineering Course Schedule – Winter 2009

edited 10/27/08

Course #	Course Title	Instructor	Cr.	Days	Time	Room	SLN
IND E 315A	Probability/Statistics for Engr.	Johnson	3	TTh	1:30-2:20	AND 223	14249
<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>							
IND E 316A	Design of Experiments	Kapur	4	TTh	10:30-12:20	MEB 242	14250
<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>							
IND E 411	Stoch. Modl & Dec. Anlys.	Zabinsky	4	MW F	9:30-10:50 9:30-11:20	MGH 234 MGH 004	14252
<i>Stochastic systems analysis applied to industrial engineering problems. Topics include: Markov chains, queueing theory, queueing applications and decision analysis. Prerequisite: IND E 315 & 410.</i>							
IND E 424A	Simulation	Lu	4	MW	2:30-4:20	MGH 231	14253
<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 & 411. IND E 411 may be taken concurrently.</i>							
IND E 494A	Design in Manufact. Firm	Storch	4	MWF F	11:30-12:20 1:30-4:20	MEB 242 MOR 225	14254
<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>							
IND E 499A	Special Projects in IE	Staff	2-5	by arrangement			14255
IND E 499B	Honors – Special Projects	Staff	2-5	by arrangement			14256
IND E 513	Linear Optimization Models in Engr.	Ghate	3	MW	1:30-2:50	MEB 234	14257
<i>Advanced formulation techniques to expand applications of linear programming to large scale models. Appreciation of role of optimization models in engineering applications through introduction of techniques such as decomposition. Individual engineering projects. Prerequisites: IND E 410 and MATH 308 or permission of instructor.</i>							
INDE 518	Seminar in Manufacturing Mgmt.	Ramulu	1	Th	3:30-4:20	LOW 202	14907
<i>Current topics and advances made in manufacturing and management. Topics presented by invited speakers from academia and industry. Emphasis on the multidisciplinary nature of manufacturing and management Offered: jointly with IND E 518.</i>							
IND E 545	User-Centered Design	Turns	4	TTh	2:30-4:20	ART 006	14262
<i>Explores the user-centered design paradigm from a broad perspective, emphasizing how user research and prototype assessment can be integrated into different phases of the design process. Students learn to think like a user-centered designer and carry out activities that are key to user-centered design. Offered: jointly with T C 518.</i>							
IND E 551	Dynamic Enterprise Modeling	Brayman	3	MW	4:30-5:50	MEB 234	14263
<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>							
IND E 566	Intro. to Ergonomics	Johnson	3	Th	9:30-12:20	HST T360A	14264
<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>							
IND E 567	Applied Occupational Health	Johnson	3	T	2:30-5:20	HST T360A	14265
<i>Application of occupational safety and health principles. Student teams perform evaluations, assess production methods/processes and exposures, health and safety procedures and programs, and develop engineering and administrative controls. Students perform on a consulting project with a local company including budgeting, project reporting, and presentation. Joint with ENV H 559 and NSG 505.</i>							
IND E 592A	IE Graduate Seminar	Zabinsky	1	T	1:30-2:20	MEB 237	14266
<i>Credit/no credit only. Topics of current interest in industrial engineering. Prerequisite: graduate standing in Industrial Engineering or permission of instructor.</i>							
IND E 595	Global Integrated Systems Engr.	Mastrangelo	6	F			19248
<i>Includes systems engineering, project management, finance, economics, and seminars. Concludes with a team-based design project involving a large scale system. The project enables students to apply their modeling skills to a real world problem and present their results to a panel comprised of practioners, academics, and clients. Offered: jointly with AA 595.</i>							
IND E 599E	Special Topics in IE	Staff	1-5	by arrangement			14267
IND E 599H	Discrete Network Optimization	Berge	3	T	4:30-7:20	MEB 102	14270
IND E 600A	Independent Study/Research (C/NC)	Staff	1-10	by arrangement			
IND E 700A	Master's Thesis	Staff	1-10	by arrangement			
IND E 800A	Doctoral Dissertation	Staff	1-10	by arrangement			