IND E 250  Engineering Economics  Zangeneh  4  MTWF  12:30-1:20  MEB 238  14561

IND E 315  Probability/Statistics for Engr.  Barker  3  TTH  10:30-11:50  KNE 120  14562
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, MATH 307 or AMATH 351.

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.

IND E 321  Statistical Quality Control  Mastrangelo  4  MW  2:30-4:20  LOW 206  14564
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

Stochastic systems analysis applied to industrial engineering problems. Topics include: Markov chains, queueing theory, queueing applications and decision analysis. Prerequisite: IND E 315 & 410.

IND E 424  Simulation  Beamon  4  MW  12:30-2:20  MGH 044  14566
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.

IND E 494  Design in Manufact. Firm  Storch  4  MWF  11:30-12:20  MEB 242  14567
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 & HCDE 333.

IND E 499A  Special Projects in IE  Staff  2-5  by arrangement  14569

IND E 499B  Honors – Special Projects  Staff  2-5  by arrangement  14570

IND E 521  Quality Control in Manufacturing  Mastrangelo  3  MW  2:30-4:20  LOW 206  14574
Design of quality control systems in manufacturing. Use of advanced statistical process controls (SPC), sampling, inspection techniques, process capability and other statistical tools. Also includes vendor sourcing and control tools, methods for establishing specifications and tolerances, quality function deployment and other quality control techniques. Prerequisite: graduate standing. Offered: jointly with EDGE.

IND E 545C  User-Centered Design  Walter  4  T  3:30-7:20  SAV 138  14578
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 HCDE 518.

IND E 566  Intro. to Ergonomics  Johnson  3  Th  9:30-12:20  HST T474  14582
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. Offered: jointly with ENV H 566/NSG 508.

IND E 567  Applied Occupational Health  Johnson/Camp  3  T  2:30-5:20  HST T360A  14583
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. Offered: jointly with ENV H 559 and NSG 505.

IND E 582  Technical Leadership  Ross  3  T  4:00-6:50  LOW 216  14584
Effectively leading engineers takes different skills and competencies than leading people in most any other field because engineers are creative, analytical, intelligent and independent. Subject matter includes how to motivate, how to reach consensus, how to work virtually, how to recruit, how to work with different cultures and more. Offered: jointly with EDGE.

IND E 592A  IE Graduate Seminar  Zabinsky  1  T  12:30-1:20  LOW 202  14586
Credit/no credit only. Topics of current interest in industrial engineering. Prerequisite: graduate standing in Industrial Engineering or permission of instructor.

IND E 599H  Analytical Meth. in Human Factors  Boyle  3  Th  5:00-7:50  BAG 261  14594

IND E 599A  Special Topics/Independent Study (graded)  Staff  1-5  by arrangement  14591

IND E 600  Independent Study/Research (C/NC)  Staff  1-10  by arrangement  14597

IND E 700A  Master’s Thesis  Staff  1-10  by arrangement  14598

IND E 800A  Doctoral Dissertation  Staff  1-10  by arrangement  14599