Industrial Engineering Course Schedule – Autumn 2008

edited 5/01/08

Course #	Course Title	Instructor	Cr.	Days	Time	Room	SLN
IND E 101	**Intro. Indust. Engr.**	Heim	1	M	3:30-4:20	MGH 241	14574
Basics of industrial cost analysis and accounting. Application of interest computations to engineering decision making. Analysis of engineering alternatives based on use of interest computations, valuations, depreciation, and cost estimates in process and product manufacturing.							
IND E 250A	**Fund. Engr. Economics**	Miyata	4	MTWF	8:30-9:20	MEB 103	14575
Basics of industrial cost analysis and accounting. Application of interest computations to engineering decision making. Analysis of engineering alternatives based on use of interest computations, valuations, depreciation, and cost estimates in process and product manufacturing.							
IND E 315A	**Probability/Stats. for Engr**.	Mastrangelo	3	MW	1:30-2:50	HCK 132	14576
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.							
IND E 337A	**Intro to Manufact. Systems**	Storch	4	TTh	2:30-5:20	MEB 103	14577
Description of manufacturing systems. Includes discussion of current trends in manufacturing. Introduces process flow analysis, manufacturing organizations including job-shop, assembly lines, and group technology, manufacturing inventory philosophies (just-in-time, MRP, OPT), work environment, and work simplification.							
IND E 410	**Linear Programming**	Ghate	4	MW F	9:30-10:50 9:30-11:20	JHN 111 MGH 044/JHN 075	14578
Modeling and optimization of linear network problems. Topics include: optimization of linear systems, mathematical model design, simplex method, primal-dual algorithms, parametric programming, goal programming, network problems and algorithms, and PERT/CPM. ***Prerequisite: either MATH 136 or MATH 308; CSE 142***							
IND E 430	**Manufacturing Sched. & Inven.**	Beamon	4	TTh	10:30-12:20	MGH 251	14579
Manufacturing scheduling and inventory control for different work organizations. Coverage of workforce scheduling, job- and flow-shop scheduling and order release, production line balancing, MRP II, Lean Production, and data management. Particular attention to computer-based aspects of management and scheduling for manufacturing and service industries. Prerequisites: IND E 337 & 411, both of which may be taken concurrently.							
IND E 455A	**User Interface Design**	Furness	4	MWF F	11:30-12:20 2:30-4:20	THO 134 MGH 030	14580
Design oriented to cover fundamentals of user interface design; models on human computer interaction, software psychology, input devices, usability, cognitive and perceptual aspects of human-computer interaction, advanced interface, and research methodologies are discussed. ***Offered jointly with TC 455A.***							
IND E 499A	**Special Projects in IE**	*Faculty*	2-5	*by arrangement*			14583
IND E 499H	**Honors – Special Projects**	*Faculty*	2-5	*by arrangement*			14584

IND E 521	**Quality Control in Mfg.**	Mastrangelo	3	MW	11:30-12:50	LOW 202	14586
Design of quality control systems in manufacturing. Use of advanced statistical process controls, 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. **Also offered through EDGE.**							
IND E 537A	**Intro to Mfg. Systems**	Storch	3	TTh	2:30-5:20	MEB 103	14588
Graduate-level equivalent to IND E 337.							
IND E 543	**Virtual Interface Technology**	Furness	1-3	MW	1:30-2:50	MUS 213	14589
Explores advanced concepts and technologies for interfacing humans to complex machines, with focus on virtual interfaces. Interface design principles reviewed from psychological and technological perspectives. Hardware, software, and mindware aspects of virtual interfaces investigated. Applications postulated and designed.							
IND E 564	**Health & Safety Hazards in Ind.**	Camp/Seixas	2	F	10:30-12:20	HST T663 HST T360	14590
Develops skills in occupational health and safety hazard recognition in a variety of important northwest industries. Focuses on process understanding and hazard recognition skills during walk-through inspections of several local facilities, stressing a multidisciplinary approach. Offered: jointly with ENV H 564.							
IND E 570	**Supply Chain Systems**	Beamon	3	TTh	2:30-3:50	MEB 242	14591
Develops concepts related to the design, evaluation, and performance of supply chain systems through an exploration of contemporary practice and research, focusing on current issues, analytical frameworks, and case studies. Prerequisite: IND E 315 or equivalent.							
IND E 591A	**Graduate Seminar**	Kapur	1	T	1:30-2:20	MEB 250	14592
Credit/no credit only. Topics of current interest in industrial engineering. Prerequisite: graduate standing in Industrial Engineering or permission of instructor.							
IND E 599A	**Special Topics in IE**	Faculty	1-5	*by arrangement*			14593
IND E 599B	**GISE**	Mastrangelo	9	alternating F/SAT		F in EEB 025 S in EEB 003	14594
IND E 599E	**"Applied Engineering"**	Gibbons	1	M	9:30-10:20	MGH 231	14596
IND E 600A	**Independent Study/Research**	Faculty	1-10	by arrangement			14597
IND E 700A	**Master's Thesis**	Faculty	1-10	by arrangement			14598
IND E 800A	**Doctoral Dissertation**	Faculty	1-10	by arrangement			14599