

**Industrial & Enterprise Systems Engineering
Industrial Engineering Undergraduate Curriculum
(132 credit hours)**

(Effective for first-year students entering Fall 1997 – Summer 2006)

Semester 1

CHEM 102 [101]—General Chemistry	3
CHEM 103 [105]—General Chemistry Lab	1
ENG 100—Engineering Lecture	0
IE 170/GE 101 [103]—Computer Aided Design/ Engineering Graphics & Design ¹	3
MATH 220 [120]—Calculus I	5
Elective in Social Sciences or Humanities ²	<u>3</u>
	15

Semester 3

CS 101— Intro to Computing, Eng & Sci	3
MATH 242—Calculus of Several Variables	3
PHYS 212 [112]—Univ Physics, Elec & Mag	4
TAM 210 [150]—Introduction to Statics	3
Elective in Social Sciences or Humanities ²	<u>3</u>
	16

Semester 5

IE 310 [210]—Intro to Operations Research	4
IE 340 [240]—Human Factors	4
ME 330 [231]—Engineering Materials	4
MATH 415 [315]—Linear Algebra	3
Elective in Social Sciences or Humanities ²	<u>3</u>
	18

Semester 7

IE 430 [337]—Economic Found of Quality Sys	3
ME/IE Elective ⁷	3
Human Factors Elective ³	3
Operations Research Elective ⁵	3
Elective in Social Sciences or Humanities ²	3
Free Elective	<u>3</u>
	18

Semester 2

CHEM 104 [102]—General Chemistry II	3
CHEM 105 [106]—General Chemistry II Lab	1
MATH 230 [130]—Calculus II	3
PHYS 211 [111]—Univ Physics, Mechanics	4
RHET 105—Principles of Composition ¹	4
Elective in Social Sciences or Humanities ²	<u>3</u>
	18

Semester 4

IE 300 [230]—Analysis of Data	3
MATH 385 [285]—Intro Differential Equations	3
PHYS 213 [113]—Univ Physics, Thermal Physics	2
PHYS 214 [114]—Univ Physics, Quantum Phys	2
TAM 212—Introductory Dynamics	3
TAM 251 [221]—Introductory Solid Mechanics	<u>3</u>
	16

Semester 6

IE 330 [235]—Industrial Quality Control	3
IE 360 [261]—Facilities Planning and Design	3
IE 361 [262]—Production Planning and Ctrl	3
IE 390 [291]—Seminar	0
ME 350 [285]—Design for Manufacturability	3
ECE 205—Intro Elec & Electr Circuits	3
ECE206—Intro Elec & Electr Ckts Lab	<u>1</u>
	16

Semester 8

IE 470 [280]—Senior Design Project	3
Manufacturing Elective ⁴	3
Technical Elective ⁶	4
Elective in Social Sciences or Humanities ²	3
Free Electives	<u>3</u>
	16

- 1 These two courses may be taken in reverse order depending upon RHET 105 availability.
- 2 Each student must satisfy the social sciences and humanities requirements of the College of Engineering, including ECON 102 or 103, and satisfy the campus general education requirements for social sciences and humanities. It is highly recommended ECON 102 or 103 be taken prior to the fourth semester.
- 3 Human Factors Elective – 3 hours required. Choose from a departmentally approved list.
- 4 Manufacturing Elective – 3 hours required. Choose from a departmentally approved list.
- 5 Operations Research Elective – 3 hours required. Choose from a departmentally approved list.
- 6 Technical Elective – 4 hours required. Choose from a departmentally approved list.
- 7 ME/IE Elective – 3 hours required. Choose from a departmentally approved list.