

INDUSTRIAL ENGINEERING SAMPLE CURRICULUM
University of Washington

June 2008

FRESHMAN – AUTUMN QUARTER	FRESHMAN – WINTER QUARTER	FRESHMAN – SPRING QUARTER
MATH 124 – Calculus I 5	MATH 125 – Calculus II 5	MATH 126 – Calculus III 5
CHEM 142 – Chem & Lab I 5	CHEM 152 – Chem & Lab II 5	PHYS 121 – Mechanics & Lab 5
ENGL COMP 5	VLPA/I&S 5	CSE 142 – Comp Programming I 4
QUARTER TOTAL 15	QUARTER TOTAL 15	QUARTER TOTAL 14

SOPHOMORE – AUTUMN QUARTER	SOPHOMORE – WINTER QUARTER	SOPHOMORE – SPRING QUARTER
MATH 307 – Diff Equations 3	MATH 308 – Matrix Algebra 3	IND E 250 – Engr. Economics 4
PHYS 122 – Electro & Lab 5	PHYS 123 – Waves & Lab 5	MSE 170 – Materials Science 4
AA 210 – Statics 4	CEE 220 – Mech of Materials 4	ME 230 – Dynamics 4
TC 231-Tech Writing 3	IND E 315-Prob & Statistics 3	TC 333 4
QUARTER TOTAL 15	QUARTER TOTAL 15	QUARTER TOTAL 16

JUNIOR – AUTUMN QUARTER	JUNIOR – WINTER QUARTER	JUNIOR – SPRING QUARTER
IND E 337 – Intro Manufact Syst. 4	IND E 411 – Nonlin & Stoch Mdl 4	EE 215 – Fundamentals of EE 4
IND E 410 – Applied Linear Prog. 4	IND E 316 – Design of Exprmts 4	**TECH Elective 3
VLPA/I&S 5	**TECH Elective 4	**TECH Elective 4
Tech. Elective 4	VLPA/I&S 5	**TECH Elective 4
QUARTER TOTAL 17	QUARTER TOTAL 17	QUARTER TOTAL 15

SENIOR – AUTUMN QUARTER	SENIOR – WINTER QUARTER	SENIOR – SPRING QUARTER
**TECH Elective 4	IND E 494 – Design/Manuf Firm 4	IND E 495 – Senior Design 4
**TECH Elective 4	**TECH Elective 4	**TECH Elective 3
**TECH Elective 3	VLPA/I&S 5	VLPA/I&S 5
VLPA/I&S 5		
QUARTER TOTAL 16	QUARTER TOTAL 13	QUARTER TOTAL 12

** Refer to http://testbot.ieng.washington.edu/ie/academic/Current_Tech_Electives.pdf for a list of approved Technical Elective courses.

For more information contact: Industrial Engr., G7 Mechanical Engineering Bldg., Box 352650 Seattle, WA 98195
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INDUSTRIAL ENGINEERING GRADUATION REQUIREMENTS

University of Washington

June 2008

See end for Early Admission Requirements.

- ◆ Upper-Division **Admission** Requirements.

Mathematics.....[24 Credits]

- ◆ MATH 124 [5cr] Calculus with Analytic Geometry I
- ◆ MATH 125 [5cr] Calculus with Analytic Geometry II
- ◆ MATH 126 [5cr] Calculus with Analytic Geometry III
- MATH 307 [3cr] Intro to Diff Equations [pr: MATH 125]
- or AMATH 351
- MATH 308 [3cr] Matrix Algebra w/Applications [pr: MATH 126]

- IND E 315 [3cr] Prob. & Statistics for Engrs [pr: MATH 307]

Sciences.....[25 Credits]

- ◆ CHEM 142 [5cr] General Chemistry with lab
- ◆ CHEM 152 [5cr] General Chemistry with lab [pr: CHEM 142]
- ◆ PHYS 121 [5cr] Mechanics with lab [pr: MATH 124]
- ◆ PHYS 122 [5cr] Electro/Oscillatory with lab [pr: MATH 125]
- ◆ PHYS 123 [5cr] Waves with lab [pr: MATH 126]

Written and Oral Communications.....[12 Credits]

- ◆ ENGL COMP [5cr] English Composition
- TC 231 [3cr] Intro to Technical Writing [pr: ENGL COMP]
- TC 333 [4cr] Adv. Tech Writing/Oral Present [pr: TC 231]

Visual, Literary & Performing Arts

Individuals & Societies [VLPA/I&S].....[30 Credits]

Minimum 10 credits in VLPA (formerly Humanities) required.
 Minimum 10 credits in I&S (formerly Social Sciences) required.
 Additional 10 credits from either VLPA or I&S.

Engineering Fundamentals.....[28 Credits]

- CSE 142 [4cr] Computer Programming I
- MSE 170 [4cr] Fund of Material Science [pr: CHEM 152]
- AA 210 [4cr] Engr Statistics [pr: MATH 126 & PHYS 121]
- EE 215 [4cr] Fund of EE [pr: MATH 126 & PHYS 122]
- CEE 220 [4cr] Intro to Mechanics of Material [pr: AA 210]
- ME 230 [4cr] Kinematics & Dynamics [pr: AA 210]
- IND E 250 [4cr] Fundamentals of Engineering Economy

Industrial Engr. Core Courses [24 Credits]

- IND E 316 [4cr] Design of Experiments [pr: IND E 315]
- IND E 337 [4cr] Intro to Manuf. Systems
- IND E 410 [4cr] Applications of Linear Programming
[pr: MATH 308 & CSE 142]
- IND E 411 [4cr] Nonlinear Prog. & Stochastic Models
[pr: IND E 315 & IND E 410]
- IND E 494 [4cr] Design in the Manufacturing Firm
[pr: TC 333]
- IND E 495 [4cr] IE Senior Design [pr: IND E 494]

Technical Electives[min. 37 credits]

Complete min. 37 credits, including AT LEAST one course from EACH of the following 5 categories:

- A. *Operations Research*: IND E 412, IND E 424
- B. *Statistics*: IND E 321, IND E 426
- C. *Production/Operations*: IND E 430, IND E 439
- D. *Design*: IND E 351, IND E 455
- E. *General Engineering*: CHEM E 260, CSE 143

Add'l technical electives may be chosen from the approved Tech. Elective List. See IND E Adviser.

Total credits required for graduation.....[180]

Early Admission Requirements

1. Early Admission is an option for **AUTUMN QUARTER ONLY**.
2. Student **MUST** be enrolled at UW.
3. Math 124, 125 & 126; or equivalent.
4. 10 credits of physical sciences courses plus the accompanying lab at the level of PHYS 121, 122, 123; CHEM 142, 152.
5. 5 credits of English Composition.
6. 15 of the above 30 credits **MUST** have been completed at the University of Washington.