

Bachelor of Science in Industrial Engineering Graduation Requirements

Mathematics.....[24 credits]	Industrial Engineering Required Core Courses.....[24 credits]
<ul style="list-style-type: none"> ◆ MATH 124 (or 127)* [5cr] Calculus with Analytic Geometry I ◆ MATH 125 (or 128)* [5cr] Calculus with Analytic Geometry II ◆ MATH 126 (or 129)* [5cr] Calculus with Analytic Geometry III MATH 307 [3cr] Intro to Differential Equations [pr: MATH 125] MATH 308 [3cr] Linear Algebra with Applications [pr: MATH 126] IND E 315 [3cr] Prob. & Statistics for Engineers [pr: MATH 307] <p><i>*The sequence of MATH 127, 128, 129 may be taken in lieu of 124, 125, 126.</i></p>	<ul style="list-style-type: none"> IND E 316 [4cr] Design of Experiments & Regression Analysis [pr: IND E 315] IND E 337* [4cr] Intro to Manufacturing Systems IND E 410 [4cr] Linear & Network Programming [pr: either MATH 136 or MATH 308, CSE 142] IND E 411 [4cr] Stochastic Models & Decision Analysis [pr: IND E 315, IND E 410] IND E 494 [4cr] Design in the Manufacturing Firm [pr: IND E 337, senior standing] IND E 495 [4cr] Industrial Engineering Design [pr: IND E 494]
Physical Sciences.....[25 credits]	Technical Electives.....[minimum 37 credits]
<ul style="list-style-type: none"> ◆ 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] <p><i>*The accompanying lab sections to PHYS 121, 122, 123 must be completed</i></p>	<p>Complete a minimum of 37 credits, including AT LEAST one course from EACH of the following 5 categories.</p> <p>A. Operations Research:</p> <ul style="list-style-type: none"> IND E 412 [4cr] Integer and Dynamic Programming [pr: IND E 411] IND E 424 [4cr] Simulation [pr: IND E 337 & 411; 411 may be taken concurrently] <p>B. Statistics:</p> <ul style="list-style-type: none"> IND E 321 [4cr] Statistical Quality Control [pr: IND E 315] IND E 426 [4cr] Reliability Engineering & System Safety [pr: IND E 315] <p>C. Production/Operations:</p> <ul style="list-style-type: none"> IND E 430 [4cr] Manufacturing Scheduling & Inventory [pr: IND E 337 & 410; both of which may be taken concurrently] IND E 439 [4cr] Plant Layout & Material Handling [pr: IND E 410; which may be taken concurrently] <p>D. Design:</p> <ul style="list-style-type: none"> IND E 351 [4cr] Human Factors in Design IND E 455 [4cr] User Interface Design <p>E. General Engineering:</p> <ul style="list-style-type: none"> AA 260 [4cr] Thermodynamics [pr: CHEM 142, MATH 126, PHYS 121] CSE 143 [5cr] Computer Programming for Engineers II [pr: CSE 142] <p>Additional technical elective courses may also be chosen from the approved Undergraduate Technical Elective List. Refer any questions to the ISE Advisor.</p>
Written and Oral Communications.....[12 credits]	
<ul style="list-style-type: none"> ◆ ENGL COMP [5cr] University English Composition requirement ENGR 231 [3cr] Intro to Technical Writing [pr: ENGL COMP] IND E 337 [4cr] Intro to Manufacturing Systems 	
Visual, Literary & Performing Arts/Individuals & Society & Diversity [VLPA/I&S].....[30 credits]	
<p><i>Minimum 10 credits in VLPA required.</i></p> <p><i>Minimum 10 credits in I&S required.</i></p> <p><i>Minimum 3 credits of Diversity required.</i></p>	
General Engineering/Computing Courses.....[28 credits]	
<ul style="list-style-type: none"> CSE 142 [4cr] Computer Programming for Engineers MSE 170 [4cr] Fund of Material Science [pr: CHEM 152] AA 210 [4cr] Engineering Statics [pr: MATH 126, PHYS 121] EE 215 [4cr] Fund. of Electrical Engineering [pr: PHYS 122, MATH 126] CEE 220 [4cr] Intro to Mechanics of Material [pr: AA 210] ME 230 [4cr] Kinematics & Dynamics [pr: AA 210] IND E 250 [4cr] Fund. of Engineering Economy 	
Total credits required for Graduation..... 180 credits (includes 4 credits free elective)	

- ◆ -- Upper Division Admission Requirement
- [pr] -- Prerequisite course(s)
- * -- Fulfill both writing and ISE core requirements

Early Admission Requirements:

- ~AUTUMN quarter only
- ~Must be enrolled at UW w/ at least 15cr earned at UW
- ~Must complete: MATH 124, 125, 126 or equiv; 10 cr of Physical Science requirements; 5 cr ENGL COMP