

Industrial and Systems Engineering

Effective for Students Entering ISyE Fall 2016 or Later

Semesters							
Fall 1	Spring 1	Fall 2	Spring 2	Fall 3	Spring 3	Fall 4	Spring 4
Comm A ³	Econ 101 or Econ 111 Principles of Microeconomics ⁴	Engr Sci Elective ³	ISYE 313 Engr Econ Analysis ³	ISYE 315 Production Planning ³	ISYE 321 Simulation Model Lab ¹	ISYE 415 Intro Mfg. Systems ³	ISYE 450 SP Design Project ³
INTEREGR 110 Intro to Engineering ¹		CS 301, 200, 300 Intro to Programming ³	STAT 311 Intro to Math Stats ³	Stat 312 Intro to Math Stats II ³	ISYE 320 Simulation Modeling ³		
Math 221 OR Math 217 OR Math 275 ⁵	MATH 222 OR MATH 276 ⁴	MATH 234 Calculus III ⁴	MATH 340 Matrix & Linear Alg ³	ISYE 349 Intro Human Factors ³		ISYE 417 Health Systems ³	Tech Elec Quantitative Methods ³
		Liberal Studies Ethnic ³		ISYE 348 Intro Human Factors Lab ¹			
	Physics 201 General Physics ⁵			ISYE 350 JR Design ³		Liberal Studies ²⁻³	Engr Sci Elective ³
	EMA 201 Statics ³		PHYSICS 202 General Physics ⁵	ISYE 323 Operations Research ³		ISYE Tech Elec Flexible OR Co-op ²	Liberal Studies ³
	EMA 202 or ME 240 Dynamics ³				Statistics & Data Analytics Elective ³		Liberal Studies ³
CHEM 109 Advanced General Chemistry OR ⁵				Acct IS 100 Intro Fin Accounting OR ³	EPD 397 Technical Writing ³	Engr Sci Elective ³	Liberal Studies ³
			Comp Sci Elective ³	Acct IS 300 Accounting Principles ³	Tech Elec Quality Engr ³	Tech Elec Human Factors ³	
13-14	12-18	16	18	16	16	14	15

- Required ISYE courses offered every semester
- Both courses must be taken

ISyE Required Curriculum (Fall 2016 and beyond)

Mathematics and Statistics	Credits
Math 221 (or 217 or 275)	Calculus and Analytic Geometry 5
Math 222 (or 276)	Calculus and Analytic Geometry 4
Math 234	Calculus - Functions of Several Variables 4
Math 340	Elementary Matrix & Linear Algebra 3
Stat 311	Introduction to Mathematical Statistics I 3
Stat 312	Introduction to Mathematical Statistics II 3
Total Credits	22
Science	
Physics 201 (or EMA 201) ^A	General Physics 5
Physics 202 ^A	General Physics 5
Chem 109 (or 103 & 104)	General Chemistry 5-9
Comp Sci 301, 200, or 300	Introduction to Programming 3
Total Credits	18-22
Eng. & Science Electives	Eng. Science 3(Non ISyE or EPD) (min 3cr), Computer Science Elective (min 3cr), Statistics Elective (min 3cr); Additional 6 credits of electives in Eng. Science, CS, Statistics, Math, or Biology. 15
Required ISyE Courses	
Acct IS 300 (or 100)	Accounting Principles 3
ISyE 313	Engineering Economic Analysis 3
ISyE 315	Production Planning and Control 3
ISyE 320	Simulation and Probabilistic Modeling 3
ISyE 321	Simulation Modeling Laboratory 1
ISyE 323	Operations Research-Deterministic Modeling 3
ISyE 348	Human Factors Laboratory2 1
ISyE 349	Introduction to Human Factors 3
ISyE 350	Junior Design Laboratory 3
ISyE 415	Introduction to Mfg. Systems, Design & Analysis 3
ISyE 417	Health Systems Engineering 3
ISyE 450 ^D	Senior Design Project 3
Total Credits	32
ISyE Technical Electives	Human Factors, Quantitative Methods, Quality Engineering and Inter Egr 110—Intro to Engineering 12
Communication Skills	
Comm A + Comm B (EPD 397)	According to CoE regulations Technical Communication 6
Liberal Studies	
Electives	According to COE Regulations for Liberal Studies Electives 11
Econ 101 (or 111)	Principles of Micro Economics 4
	15
Min Required Credits	120

^A EMA 201 alone does NOT meet the pre-req for Physics 202. If you take EMA 201 you must take either EMA 202 or ME 240 also to meet the Physics 202 pre-requisites. EMA 202 and ME 240 will fulfill Engineering Science credit requirements.

^B This course is not required for transfer students. (Inter Egr 110 will count as a 1 credit undesignated IE Tech Elective for ISyE students)

^C InterEgr 170 (or other eligible InterEgr departmental course option) will count toward the Engineering & Science Elective credits.

^D ISYE 450 prerequisites are all ISYE required courses with the exception of one of the following courses taken concurrently (ISYE 415 OR ISYE 417)

For complete ISyE Curriculum Guide Details please visit: <https://www.engr.wisc.edu/department/industrial-systems-engineering/>

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