

**BS IN INDUSTRIAL ENG'G./MS IN OPERATIONS RESEARCH
CURRICULUM OUTLINE - CLASS OF 2019**

Sample Only – Actual Curriculum Sequence May Deviate from Sample

	FALL		SPRING		SUMMER 1	SUMMER 2		
Freshman Year 1	MATH1341	Calculus 1 for Engrs.	4	MATH1342	Calculus 2 for Engrs.	4	Vacation	Vacation
	CHEM1151	General Chem. for Engrs.	4	PHYS1151	Physics 1 Engrs.	3		
	CHEM1153	Recitation for CHEM1151	0	PHYS1152	Physics 1 Lab	1		
	GE1000	Intro to Eng'g.	1	PHYS1153	ILS for PHYS1151	1		
	GE1110	Eng'g. Design	4	GE1111	Eng'g. Prob. Solv. & Comp.	4		
	NU Core	Arts or Humanities Lvl. 1	4	ENGW1111	College Writing	4		
Year 2 AA	MATH2321	Calculus 3 for Engrs.	4	MATH2341	Diff. Eq./ Lin. Alg.	4	Vacation	Co-op
	IE2310	Intro Ind. Eng'g	4	*IE3412	Eng'g Prob. Stat.	4		
	IE2311	Recitation for IE2310	0	IE4512	Eng'g Economy	4		
	IE3425	Eng'g Database	4	NU Core	Social Science Lvl. 1	4		
	IE3426	Recitation for IE3425	0	MEIE2000	Intro to Eng'g, Co-op	1		
	***Elective	Science Elective	5					
Year 2 BA	MATH2321	Calculus 3 for Engrs.	4				Co-op	Vacation
	IE2310	Intro Ind. Eng'g	4					
	IE2311	Recitation for IE2310	0					
	IE3425	Eng'g Database	4					
	IE3426	Recitation for IE3425	0					
	***Elective	Science Elective	5					
	MEIE2000	Intro to Eng'g, Co-op	1					
Year 3 AA		Co-op		IE4516	Quality Assurance	4	Vacation	Co-op
				IE4515	Operations Research	4		
				IE4510	Simulation Mod. & An.	4		
				Elective	Technical Elective 1	4		
Year 3 BA	MATH2341	Diff. Eq./ Lin. Alg.	4				Co-op	Co-op
	*IE3412	Eng'g Prob. Stat.	4					
	IE4512	Eng'g Economy	4					
	Elective	Technical Elective 1	4					
Year 4 AA		Co-op		IE4525	Logistics & Supply Chain	4	Graduate Elective 1	Co-op
				IE4520	Stochastic Modeling	4		
				IE6200	2 Eng'g Prob. & Statistics	4		
				Graduate Elective		4		
				MEIE3000	Prof. Issues in Eng'g,	1		
				MEIE4701	Capstone Design 1	1		
Year 4 BA	IE4516	Quality Assurance	4				Graduate Elective 4	Vacation
	IE4515	Operations Research	4	IE6200	2 Eng'g Prob. & Statistics	4		
	IE4510	Simulation Mod. & An.	4	Elective	Social Science Lvl. 1	4		
	Elective	Technical Elective 2	4	Elective	1-General Elective	4		
	MEIE3000	Prof. Issues in Eng'g,	1					
Year 5 AA		3-Graduate Elective	4	MEIE4702	Capstone Design 2	5		
	OR 6205	2-Deterministic Oper. Res.	4	IE4522	Human Machine Systems	4		
	Elective	Technical Elective 2	4	IE4523	Lab for IE4522	1		
	IE4530	Mfg. Sys. & Techniques	4	OR7230	4-Probabilistic Oper. Res.	4		
	IE4531	Lab for IE4530	1	OR7245	4-Networks & Adv. Optimiz.	4		
	MEIE6850	5-Research Seminar in MIE	0					
Year 5 BA	IE4525	Logistics & Supply Chain	4	MEIE4702	Capstone Design 2	5		
	IE4520	Stochastic Modeling	4	IE4522	Human Machine Systems	4		
	OR 6205	2-Deterministic Oper. Res.	4	IE4523	Lab for IE4522	1		
	3-Graduate Elective		4	OR7230	4-Probabilistic Oper. Res.	4		
	MEIE6850	5-Research Seminar in MIE	0	OR7245	4-Networks & Adv. Optimiz.	4		
	MEIE4701	Capstone Design 1	1					

7/3/2014
7/14/2014
2/8/2017
4/10/2017

10/27/2015
6/1/2016

** ENG3315 is an acceptable substitution for engineering majors.

1-General Elective: 1 required-any 4 SH course that is not repetitive or remedial.

2- Students who received a grade of B+ or higher in IE3412 and IE4515 may waive IE6200 and OR6205, respectively, by taking other graduate courses.

3- Students may replace 8 SH of graduate coursework in the senior year with OR7990 Thesis, or 4 SH with OR7945 Project.

4- Students may take MATH7341 Probability 2 instead of OR7230 and MATH7234 Optimization and Complexity instead of OR7245.

5- Required for Students who elect to do Thesis or Project

NU Core Elective Requirements: 2 required -(one Arts or Humanities Lvl. 1 Elective AND one Social Science Lvl. 1 Elective)

Engineering Technical Electives: 2 required - any course from the following disciplines that is not a required course in the IE curriculum: IE, ME, MEIE, EMGT, OR, EECE, CIVE, CHME or CSYE

Electives may be interchanged. Please consult with your advisor : Joy Erb - 220 Snell, 617-373-2154, j.erb@neu.edu

Notes:

Students will be required to meet with an undergraduate advisor to petition to enter the program.

Students are encouraged to meet with their financial aid counselor to review any financial questions.

4 semesters of coursework at Northeastern University must be completed with a minimum GPA of 3.2 to join the BS/MS program.

The registrar's website provides a listing of degree requirements and the DARS system provides a degree audit utility for students.

***Science Elective

Complete one of the following:

PHYS 1155 Physics for Engineering 1 and PHYS 1156 Lab for PHYS 1155 and PHYS 1157 Interactive Learning Seminar for PHYS 1155
CHEM 1214 General Chemistry 2 and CHEM 1215 Lab for CHEM 1214 and CHEM 1216 Recitation for CHEM 1214
CHEM 2311 Organic Chemistry 1 and CHEM 2312 Lab for CHEM 2311 and CHEM 2319 Recitation for CHEM 2311
BIOL 1115 General Biology 1 for Engineers and BIOL 1116 Lab for BIOL 1115
BIOL 1117 Integrated Anatomy and Physiology 1 and BIOL 1118 Lab for BIOL 1117