

BS in Industrial Engineering
Degree Requirements, AY 2024-2025

Full degree requirements available at catalogs.northwestern.edu

Done	Course	Course Name	Notes
Mathematics Requirement (4 credits)			
☐	Math 220-1	Single-variable Differential Calculus	
☐	Math 220-2	Single-variable Integral Calculus	
☐	Math 228-1	Multivariable Diff. Calc. for Eng.	
☐	Math 228-2	Multivariable Int. Calc. for Eng.	
Engineering Analysis and Computer Proficiency (4 credits)			
☐	Gen Eng 205-1	EA 1	
☐	Gen Eng 205-2	EA 2	
☐	Gen Eng 205-3	EA 3	
☐	ESAM 245	ESAM 245	
Basic Sciences (4 credits; see "Basic Science Details" tab)			
☐	Required Lab Course		
☐			
☐			
☐			
Design and Communications (3 credits)			
☐	DSGN 106-1/Engl 106-1	DTC 1	
☐	DSGN 106-2/Engl 106-2	DTC 2	
☐	Communications Course	Choose one option	
☐			
Theme Courses (7 credits; see "Theme Details" tab)			
☐	Department	Soc. Science or Humanities	
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Unrestricted Electives (5 credits)			
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Done	Course	Course Name	Notes
IEMS Major Program: Engineering Econ (1 credit)			
☐	CIV_ENV 205	Engineering Econ	
IEMS Major Program: Computing (3 credits)			
☐	COMP_SCI 111	Fundamentals of Computer Programming I	Prerequisite for COMP_SCI 211
☐	COMP_SCI 150	Fundamentals of Computer Programming 1.5	
☐	COMP_SCI 217	Data Management	
IEMS Major Program: Methods Core + PL + Project (8 credits)			
☐	IEMS 302	Probability	IE/OR Methods Core
☐	IEMS 303	Statistics	
☐	IEMS 304	Statistical Learning	
☐	IEMS 313	Foundations of Optimization	
☐	IEMS 315	Stochastic Models	
☐	IEMS 317	Discrete-Event Systems Simulation	
☐	Prodn & Logistics	Choose one option	
☐	IEMS 394	IE Client Project Challenge	Junior spring or Senior fall
IEMS Major Program: IE/OR Electives (3 credits)			
☐	IE/OR Elective	Choose course option	May not count course used for Prodn & Logistics above
☐	IE/OR Elective	Choose course option	
☐	IE/OR Elective	Choose course option	
IEMS Major Program: MS Electives (2 credits)			
☐	Elective-MS	Choose course option	
☐	Elective-MS	Choose course option	
IEMS Major Program: General Technical Electives (4 credits)			
☐			Elective 1
☐			Elective 2
☐			Elective 3
☐			Elective 4
See Notes Tab or Reverse for Details			

Allowable Basic Science Courses	IE/OR Electives	General Technical Elective Options
Courses in red only allowed 2022 and Lab courses (.34 credit) only count corresponding lecture courses Physics PHYSICS 125-2/126-2 PHYSICS 135-2/136-2 PHYSICS 135-3/136-3 PHYSICS 140-2 PHYSICS 239 Chemistry CHEM 131 or 151 or 171 CHEM 132 or 152 or 172 CHEM 210-1 CHEM 210-2 CHEM 141 or 161 or 181 CHEM 142 or 162 or 182 Biological Sciences BIOL_SCI 201 BIOL_SCI 202 BIOL_SCI 203 CHEM_ENG 275 CIV_ENV 202 BIOL_SCI 150 BIOL_SCI 232 BIOL_SCI 233 BIOL_SCI 234 COG_SCI 210 Neuroscience CSD 202 CSD 303 (also PSYCH 327) PSYCH 221 Earth Sciences and Astronomy ASTRON 220 CIV_ENV 203 EARTH 214 <i>EARTH 215</i> EARTH 210 GEOG 235	IEMS 305 IEMS 307 IEMS 308 IEMS 351 IEMS 365 IEMS 373 IEMS 381 IEMS 382 IEMS 383 IEMS 385 MS Electives IEMS 325 IEMS 341 IEMS 342 IEMS 343 IEMS 344 IEMS 345 IEMS 349 General Technical Elective Exclusions <i>Not allowed as Tech Elective</i> Chem 201 Math 310-1 Math 311-1 Math 314 Math 385 Math 386-1 Physics 311-1 Physics 311-2 Physics 335 Theme Requirements Seven courses At least three must be related in content At least 2 humanities, at least 2 social sciences More info available online. <i>These courses may NOT be used for GTEs</i> Any BUS_INST or Kellogg course ECON 281 ECON 380-1 ECON 380-2 ECON 381-1 ECON 381-2 ENGLISH 106-1 ENGLISH 106-2 GEOG 341 PSYCH 201	<i>Allowable courses for Tech Electives</i> 200-level or higher courses in McCormick (this excludes CRDV and PRDV courses) 200-level or higher courses in Bio, Chem, Physics STAT 302-0 STAT 320-3 STAT 325-0 STAT 328-0 STAT 330-1 STAT 330-2 STAT 332-0 STAT 342-0 STAT 344-0 STAT 345-0 STAT 348-0 STAT 352-0 STAT 353-0 STAT 354-0 STAT 355-0 STAT 356-0 STAT 357-0 STAT 365-0 STAT 370-0 BUS_INST 301 BUS_INST 302 BUS_INST 303 Econ 309 Econ 331 Econ 336 Econ 339 Econ 349 Econ 350 Econ 355 Econ 360-2 Econ 362 Econ 380-1,2 Econ 381-1,2 Econ 383 IMC 303 ISEN 220 ISEN 230 <i>May include up to 2 units of IEMS 399</i> <i>At most 2 GTEs may be taken P/N</i>