

Industrial Engineering and Management (IE&M)

Undergraduate Curriculum Guide effective Fall 2015 ~ North Dakota State University

STUDENT _____

NAID # _____

Advisor _____

	Fall				Spring			
	Course	Crs	Semester	Grade	Course	Crs	Semester	Grade
Freshman (<27 crs)	CHEM 121	General Chemistry I	3		IME 111	Introduction to IME	3	
	CHEM 121L	General Chem Lab I	1		MATH 166	Calculus II	4	
	[C] ENGL 110	College Composition I	3		ME 212	Fund of Visual Comm	3	
	ENGL 120	College Composition II	3		ME 221	Engr Mechanics I	3	
	MATH 165	Calculus I	4		CHEM 122	General Chemistry II	3	
	UNIV 189	Skills for Acad Success	1					
	Comp Sci Elect	(see side bar)	3					
		18				16		
Sophomore (27-59 crs)	COMM 110	Fund of Public Speaking	3		IME 311	Work/Station Design	3	
	IME 330	Mfg Processes	3		IME 440	Engineering Economy	3	
	MATH 129	Basic Linear Algebra	2		MATH 266	Differential Equations	3	
	MATH 259	Multivariate Calculus	3		PHYS 252	University Physics II	4	
	ME 222	Engr Mechanics II	3		PHYS 252L	University Physics II Lab	1	
	Gen Ed Elect	(see side bar)	3		Engr Sci Elect	(see side bar)	3	
		17				17		
Junior (60 - 89 crs)	IME 456	Program & Project Mgmt	3		IME 461	Quality Assurance & Cntrl	3	
	IME 460	Evaluation of Engr Data	3		IME 470	Operations Research I	3	
	ENGL 321	Writing in Tech Profession	3		IME 472	Simulation Bus & Indl Sys	3	
	Engr Sci Elect	(see side bar)	3		Engr Sci Elect	(see side bar)	3	
	Ged Ed Elect	(see side bar)	3		Gen Ed Elect	(see side bar)	3	
					Wellness Elect	(see side bar)	2	
		15				17		
Senior (90 + crs)	ENGR 402	Engr Ethics & Social Resp	1		IME 450	Systems Engr & Mgmt	3	
	IME 480	Production & Inventory Cnt	3		IME 485	Indl & Mfg Facility Design	3	
	IME 482	Automated Mfg Systems	3		IME 489	IME Capstone	3	
	Engr Sci Elect	(see side bar)	3		Technical Elect	(see side bar)	3	
	Gen Ed Elect	(see side bar)	3		Technical Elect	(see side bar)	3	
Technical Elect	(see side bar)	3						
		16				15		
TOTAL CREDITS						131		

Key:

"T" indicates requirement satisfied with transfer credits.

"IP" indicates a course currently in progress.

Grades less than "C" will not be accepted for CHEM, MATH, and PHYS.

[F] Students transferring in 24 or more credits are not required to take UNIV 189.

[C] First Year students with a composite ACT score of ≥ 21 may register for ENGL 120. A passing grade will be awarded for ENGL 110 by completing ENGL 120 with a "C" or better.

General Education Electives			
See Registration Schedule for approved courses.			
A-Humanities/Fine Arts	Crs	Semester	Grade
*	3		
*	3		
B-Social/Behavioral Sciences			
*	3		
*	3		
W- Wellness	2		
D - Cultural Diversity			
G - Global Perspectives			
	14		

IE&M Electives			
Approved electives are listed on the back of this page.			
	Crs	Semester	Grade
Computer Science Elective	3		
*	3		
Engineering Science Require	12		
CE 309	3		
ME 223	3		
ME 350	3		
ECE 275 or ECE 301 or EE 206	3		
Technical Electives	9		
*	3		
*	3		
*	3		

IE&M Approved Electives

NOTES:

To use a course not listed, submit an approved "Substitute Course" form to the Office of Registration & Records, Ceres 110.

Forms are available on the web at <<http://www.ndsu.edu/registrar/forms/waivecourse.pdf>>

Computer Science Electives (3 credits)			
CSCI	122	Visual BASIC	3
CSCI	126	Beginning FORTRAN	3
CSCI	160	Computer Science I	4
ECE	173	Introduction to Computing	3
Engineering Science Requirement (12 credits)			
Course			Credits
CE	309	Fluid Mechanics	3
ME	223	Mechanics of Materials	3
ME	350	Thermodynamics/Heat Trsf	3
Take 1 of the following 3 courses:			
EE	206	Circuit Analysis I	4
ECE	275	Digital Systems I	4
ECE	301	Electrical Engineering I	3

Technical Electives (9 credits)			
Approved Courses			Credits
IME	380	CAD.CAM for Manufacturing	3
IME	335	Welding Technology	3
IME	411	Human Factors Engr	3
IME	427	Packaging for Electronics	3
IME	430	Process Engineering	3
IME	431	Production Engineering	3
IME	432	Composite Materials Mfg	3
IME	433	Additive Manufacturing	3
IME	437	Methods for Precision Mfg	3
IME	451	Logistics Engr & Mgmt	3
IME	452	Integrated Indl Info Systems	3
IME	453	Hospital Management Engineering	3
IME	455	Management of People Systems	2
IME	462	Total Quality in Indl Mgmt	3
IME	463	Reliability Engineering	3
Maximum of 1 of the following 4 courses may be counted as technical elective.			
BUSN	340	International Business	3
MGMT	320	Foundations of Mgmt	3
MRKT	320	Foundations Marketing	3
BUSN	431	Business Law I	3

^ 300-400 level BUSN courses require at least Junior standing and a minimum

^ 2.50 cumulative GPA.