

Name: _____

NORTH DAKOTA STATE UNIVERSITY
College of Engineering and Architecture
Industrial Engineering and Management (IE&M)

T = Transfer Credit
IP = Course is 'In Progress'

Fall 2012

ID: _____

General Education Requirements - 40 Credits Required					IE&M Engineering Major									
Course	Number	Course Title	Credits	Grade	Course	Number	Course Title	Credits	Grade					
First Year Experience (F)			1 Sem Credit		IME Courses Required - 42 Credits Required									
UNIV	189 ¹	Skills for Academic Success	1		IME	111	Introduction to IME	3						
Communication (C)			12 Sem Credits		IME	311	Work/Station Design	3						
ENGL	110	College Composition I	3		IME	330	Manufacturing Processes	3						
ENGL	120	College Composition II	3		IME	440	Engineering Economy	3						
COMM	110	Fund of Public Speaking	3		IME	450	Systems Engineering & Management	3						
ENGL	321	Writing in the Tech Profession	3		IME	456	Program and Project Management	3						
Quantitative Reasoning (R)			3 Sem Credits		IME	460	Evaluation of Engineering Data	3						
MATH	165	Calculus I	4		IME	461	Quality Assurance and Control	3						
Science & Technology (S)			10 Sem Credits		IME	462	Total Quality in Industrial Management	3						
CHEM	121	General Chemistry I	3		IME	470	Operations Research I	3						
CHEM	122	General Chemistry II	3		IME	472	Simulation Bus & Industrial Syst	3						
PHYS	252	University Physics II	4		IME	480	Production and Inventory Control	3						
CHEM	121L	Co-Req Lab Requirement	1		IME	482	Automated Manufacturing Systems	3						
Humanities & Fine Arts (A)			6 Sem Credits		IME	485	Industrial & Manf Facility Design	3						
			3		MATH Courses Required - 12 Credits Required									
			3		MATH	129	Basic Linear Algebra	2						
Social & Behavioral Sciences (B)			6 Sem Credits		MATH	166	Calculus II	4						
			3		MATH	259	Multivariate Calculus	3						
			3		MATH	266	Intro to Differential Equations	3						
Wellness (W)			2 Sem Credits		ME Courses Required - 9 Credits Required									
			2		ME	212	Fundamentals of Visual Comm	3						
Cultural Diversity (D)					ME	221	Engineering Mechanics I	3						
					ME	222	Engineering Mechanics II	3						
Global Perspectives (G)					Other Courses Required - 2 Credit Required									
					ENGR	402	Engineering Ethics & Social Respon	1						
					PHYS	252L	University Physics II Lab	1						
¹ Students transferring in 24 or more credits do not need to take UNIV 189. Grades less than a 'C' will not be accepted in transfer for CHEM, MATH, and PHYS.					IE&M Electives - 24 credits required (approved courses on backside)									
					Computer Science Elective - 3 credits									
													3	
					Engineering Science Requirements - 12 credits									
					CE	309							3	
					ME	223							3	
					ME	350							3	
													3	
					Technical Electives - 9 credits									
													3	
								3						
								3						
Total Credits Required for Graduation:									131					

IE&M Engineering Approved Electives

NOTES:

*To use a course not listed, submit a "Substitute Course" form, signed and approved by the department chairperson, to the Office of Registration & Records, Ceres 110. Forms are available on the web at www.ndsu.edu/registrar (forms link)

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
Any programming language course must be approved by your advisor.			

ENGR Science Requirement (12 credits)			
Course			Credits
CE	309	Fluid Mechanics	3
ME	223	Mechanics of Materials	3
ME	350	Thermodynamics/Heat Transfer	3
Take 1 of the following 3 courses:			
EE	206	Circuit Analysis I	4
ECE	275	Digital Systems I	3
ECE	301	Electrical Engineering I	3

Technical Electives (9 credits)			
Approved Courses			Credits
IME	335	Welding Technology	3
IME	380	CAD/CAM for Manuf	3
IME	411	Human Factors Engr	3
IME	427	Electronics Mfg	3
IME	430	Process Engineering	3
IME	431	Production Engineering	3
IME	432	Composites Manufacturing	3
IME	451	Logistics Engr & Mgmt	3
IME	452	Integrated Indl Info Syst	3
IME	453	Hospital Mgmt Engr	3
IME	463	Reliability Engineering	3
IME	494	Individual Study	1-3
Maximum of 1 of the following 5 courses may be counted as technical electives.			
BUSN	340	International Business	3
MGMT	320	Foundations of Mgmt	3
MRKT	320	Foundations Marketing	3
BUSN	431	Business Law I	3
MIS	370	Management Info System	3

*Other technical elective courses: Students may request approval for other 300-400 level engineering or related courses to be approved as technical electives. To request approval, a student should submit a memo to their academic advisor indicating the course of interest and why the course should be approved as a technical elective. This memo will be reviewed by the academic advisor and the IME Department for approval.

300-400 level BUSN courses require at least Junior standing and a minimum 2.50 cumulative GPA.