

UNIVERSITY OF MIAMI
DEPARTMENT OF INDUSTRIAL ENGINEERING
BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING
MANUFACTURING ENGINEERING CONCENTRATION
125 Credits
2012 - 2013

Freshman Year:					
IEN 111	Introduction to Engineering I	3	IEN 112	Introduction to Engineering II	2
ENG 105	English Composition I	3	ENG 107	Writing About Science	3
MTH 151	Calculus I for Engineers	5	MTH 162	Calculus II	4
PHY 205	University Physics I	3	PHY 206	University Physics II	3
			PHY 208	University Physics II Lab	1
			ECO 211	Economic Principles and Problems	3
Total			14	Total	
				16	

Sophomore Year:					
ECO 212	Economic Principles and Problems	3	COS 211	Public Speaking	3
IEN 201	Methods Analysis & Work Measurements	3	EEN 205	Principles of Electrical Engineering I	3
			or		
			CAE 210	Mechanics of Solids I	
			or		
			MAE 303	Thermodynamics I	
MTH 210	Introduction to Linear Algebra	3	CHM 151	Chemistry for Engineers I	3
PHY 207	University Physics III	3	CHM 153	Chemistry Lab for Engineers	1
PHY 209	University Physics III Lab	1	MTH 311	Ordinary Differential Equations	3
	Humanities and Arts Elective*	3		Advanced PS/HA Elective*	3
Total			16	Total	
				16	

Junior Year:					
IEN 310	Introduction to Engineering Probability	3	IEN 312	Applied Statistical Methods	3
IEN 351	Industrial Safety Engineering	3	IEN 361	Industrial Cost Analysis	3
IEN 380	Engineering Economy	3	IEN 363	Project Management for Engineers	3
IEN 441	Deterministic Models in Operations Research	3	IEN 406	Computer-Aided Manufacturing	3
	Advanced PS/HA Elective*	3	IEN 407	Product Design for Manufacturing	3
			IEN 442	Stochastic Models in Operations Research	3
Total			15	Total	
				18	

Senior Year:					
IEN 465	Production & Inventory Control	3	IEN 494	Senior Project	3
IEN 505	Robotics	3	IEN 507	Design of Manufacturing Systems	3
IEN 512	Statistical Quality Control & Quality Management	3	IEN 509	Automated Assembly	3
IEN 547	Computer Simulation Systems	3	IEN 524	Decision Support Systems in IE	3
IEN 557	Ergonomics & Human Factors Engineering	3	IEN 568	Materials Handling & Facilities Planning	3
Total			15	Total	
				15	

* PS/HA Electives are selected from a list of approved electives maintained in the department at UM.