

**UNIVERSITY OF MIAMI**  
**DEPARTMENT OF INDUSTRIAL ENGINEERING**  
**BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING**  
*128 Credits*  
**2017 - 2018**

<b>Freshman Year:</b>					
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 (People and Society Cognate) (PS Elective)*	3
<b>Total</b>			<b>Total</b>		
<b>14</b>			<b>16</b>		

<b>Sophomore Year:</b>					
	People and Society Cognate*	3		Humanities and Arts Cognate (HA Elective)*	3
IEN 201	Methods Analysis & Work Measurements	3	ECE 205 or CAE 210 or MAE 303	Principles of Electrical Engineering I or Mechanics of Solids I or Thermodynamics I	3
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 Cognate *	3		People and Society Cognate (Adv. PS Elective)*	3
<b>Total</b>			<b>Total</b>		
<b>16</b>			<b>16</b>		

<b>Junior Year:</b>					
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
	Humanities and Arts Cognate*	3	IEN 442	Stochastic Models in Operations Research	3
				Technical Elective***	3
<b>Total</b>			<b>Total</b>		
<b>15</b>			<b>18</b>		

<b>Senior Year:</b>					
IEN 465	Production & Inventory Control	3	IEN 494	Senior Project	3
IEN 512	Statistical Quality Control & Quality Management	3	IEN 524	Decision Support Systems in IE	3
IEN 547	Computer Simulation Systems	3	IEN 568	Materials Handling & Facilities Planning	3
IEN 557	Ergonomics & Human Factors Engineering	3		IEN Elective***	3
	IEN Elective***	3		IEN Elective***	3
<b>Total</b>			<b>Total</b>		
<b>15</b>			<b>15</b>		

\* Students must complete a minimum of 1 PS cognate and 1 HA cognate, to be selected from the list of available cognates. Each cognate should be a minimum of 3 courses (minimum of 9 credits). Students have to select a PS cognate that includes ECO 211 & ECO 212

\*\* The Technical Elective is selected from courses at the 300 level or above, offered by one of the following departments: MTH, BME (except BME 320), CAE, ECO, EEN, IEN, MAE, ACC, FIN, MGT (except MGT 303), MAS, MKT.

\*\*\* IEN electives are selected from courses at the 300 level or above offered by the Department of Industrial Engineering, with the approval of the Faculty Advisor