

**UNIVERSITY OF MIAMI**  
**DEPARTMENT OF INDUSTRIAL ENGINEERING**  
**BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING**  
**PRE-MEDICAL CONCENTRATION**

*135 Credits*  
*2012 - 2013*

<b>Freshman Year:</b>					
<a href="#">IEN 111</a>	Introduction to Engineering I	3	<a href="#">IEN 112</a>	Introduction to Engineering II	2
<a href="#">ENG 105</a>	English Composition I	3	<a href="#">ENG 107</a>	Writing About Science	3
<a href="#">MTH 151</a>	Calculus I for Engineers	5	<a href="#">MTH 162</a>	Calculus II	4
<a href="#">PHY 205</a>	University Physics I	3	<a href="#">PHY 206</a>	University Physics II	3
<a href="#">ECO 211</a>	Economic Principles and Problems	3	<a href="#">PHY 208</a>	University Physics II Lab	1
			<a href="#">CHM 111</a>	Principles of Chemistry I	3
			<a href="#">CHM 113</a>	Chemistry Laboratory I	1
<b>Total</b>			<b>17</b>	<b>Total</b>	
				<b>17</b>	

<b>Sophomore Year:</b>					
<a href="#">BIL 150</a>	General Biology	4	<a href="#">BIL 160</a>	Evolution & Biodiversity	4
<a href="#">BIL 151</a>	General Biology Lab	1	<a href="#">BIL 161</a>	Evolution & Biodiversity Lab	1
<a href="#">CHM 112</a>	Principles of Chemistry II	3	<a href="#">COS 211</a>	Public Speaking	3
<a href="#">CHM 114</a>	Chemistry Laboratory II	1	<a href="#">ECO 212</a>	Economic Principles and Problems	3
<a href="#">MTH 210</a>	Introduction to Linear Algebra	3	<a href="#">MTH 311</a>	Ordinary Differential Equations	3
<a href="#">PHY 207</a>	University Physics III	3	<a href="#">PHY 209</a>	University Physics III Lab	1
<a href="#">IEN 201</a>	Methods Analysis & Work Measurements	3		Humanities and Arts Elective*	3
<b>Total</b>			<b>18</b>	<b>Total</b>	
				<b>18</b>	

<b>Junior Year:</b>					
<a href="#">CHM 201</a>	Organic Chemistry I (Lecture)	3	<a href="#">CHM 202</a>	Organic Chemistry II (Lecture)	3
<a href="#">CHM 205</a>	Organic Chemistry Laboratory I	1	<a href="#">CHM 206</a>	Organic Chemistry Laboratory II	1
<a href="#">IEN 310</a>	Introduction to Engineering Probability	3	<a href="#">IEN 312</a>	Applied Statistical Methods	3
<a href="#">IEN 351</a>	Industrial Safety Engineering	3	<a href="#">IEN 361</a>	Industrial Cost Analysis	3
<a href="#">IEN 380</a>	Engineering Economy	3	<a href="#">IEN 363</a>	Project Management for Engineers	3
<a href="#">IEN 441</a>	Deterministic Models in Operations Research	3	<a href="#">IEN 442</a>	Stochastic Models in Operations Research	3
<b>Total</b>			<b>16</b>	<b>Total</b>	
				<b>16</b>	

<b>Senior Year:</b>					
<a href="#">IEN 465</a>	Production & Inventory Control	3	<a href="#">IEN 406</a>	Computer-Aided Manufacturing	3
<a href="#">IEN 512</a>	Statistical Quality Control & Quality Management	3	<a href="#">IEN 494</a>	Senior Project	3
<a href="#">IEN 547</a>	Computer Simulation Systems	3	<a href="#">IEN 513</a>	Quality Management in Service Organizations	3
<a href="#">IEN 557</a>	Ergonomics & Human Factors Engineering	3	<a href="#">IEN 524</a>	Decision Support Systems in IE	3
	Advanced PS/HA Elective*	3	<a href="#">IEN 568</a>	Materials Handling & Facilities Planning	3
	Advanced PS/HA Elective*	3			
<b>Total</b>			<b>18</b>	<b>Total</b>	
				<b>15</b>	

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