UNIVERSITY OF MIAMI
DEPARTMENT OF INDUSTRIAL ENGINEERING
BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING
PRE-MEDICAL CONCENTRATION
138 Credits
2016 - 2017

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
ECO 211	Economic Principles and Problems	3	PHY 208	University Physics II Lab	1
			CHM 111	Principles of Chemistry I	3
			CHM 113	Chemistry Laboratory I	1
	Total	**17**		***Total***	**17**

Sophomore Year:					
BIL 150	General Biology	4	BIL 160	Evolution & Biodiversity	4
BIL 151	General Biology Lab	1	BIL 161	Evolution & Biodiversity Lab	1
CHM 112	Principles of Chemistry II	3	MTH 311	Ordinary Differential Equations	3
CHM 114	Chemistry Laboratory II	1	PHY 209	University Physics III Lab	1
MTH 210	Introduction to Linear Algebra	3		People and Society Cognate*	3
PHY 207	University Physics III	3		Humanities and Arts Cognate*	3
IEN 201	Methods Analysis & Work Measurements	3		Humanities and Arts Cognate*	3
	Total	***18***		***Total***	***18***

Junior Year:					
CHM 201	Organic Chemistry I (Lecture)	3		Advanced Bioscience Elective**	3
CHM 205	Organic Chemistry Laboratory I	1		Advanced Bioscience Elective**	3
IEN 310	Introduction to Engineering Probability	3		Technical or Science Lab Elective**	1
IEN 351	Industrial Safety Engineering	3	IEN 312	Applied Statistical Methods	3
IEN 380	Engineering Economy	3	IEN 361	Industrial Cost Analysis	3
IEN 441	Deterministic Models in Operations Research	3	IEN 363	Project Management for Engineers	3
			IEN 442	Stochastic Models in Operations Research	3
	Total	***16***		***Total***	***19***

Senior Year:					
IEN 465	Production & Inventory Control	3	IEN 406	Computer-Aided Manufacturing	3
IEN 512	Statistical Quality Control & Quality Management	3	IEN 494	Senior Project	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
	Humanities and Arts Cognate*	3		People and Society Cognate*	3
	People and Society Cognate*	3			
	Total	***18***		***Total***	***15***

* 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).** Advanced Bioscience Elective is to be chosen from BMB 260, BIL 250, BIL 255, BIL 268, MIC 301, CHM 202 or BMB 402. **Students should verify admission requirements of their medical school of interest to verify Adv. Bioscience requirements, e.g. organic chemistry II, biochemistry, or both**** Technical or Science Elective Lab is selected from a science lab complementing the Adv. Bioscience Elective (e.g., CHM or BIL lab)