

UNIVERSITY OF MIAMI
DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING
126 Credits
2013 - 2014

Freshman Year:					
MAE 111	Introduction to Engineering I	3	MAE 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
			CAE 210	Mechanics of Solids I	3
Total			Total		
14			16		

Sophomore Year:					
MAE 207	Mechanics of Solids II	3	MAE 202	Dynamics	3
IEN 311	Applied Probability & Statistics	3	MAE 241	Measurements Laboratory	3
MTH 211	Calculus III	3	EEN 205	Principles of Electrical Engineering I	3
PHY 207	University Physics III	3	CHM 151	Chemistry for Engineers I	3
PHY 209	University Physics III Lab	1	CHM 153	Chemistry Lab for Engineers	1
ECO 211 <i>or</i>	Economic Principles and Problems	3		Humanities and Arts Cognate (HA	3
ECO 212	(People and Society Cognate) (PS Elective)*			Elective)*	
Total			Total		
16			16		

Junior Year:					
MAE 302	Mechanical Behavior of Materials	3	MAE 301	Engineering Materials Science	3
MAE 303	Thermodynamics I	3	MAE 310	Heat Transfer	3
MAE 309	Fluid Mechanics	3	MAE 342	Mechanical Design II	3
MAE 341	Mechanical Design I	3	MAE 351	Mechanics Laboratory	2
MTH 311	Ordinary Differential Equations	3	MAE 362	Computer Analysis of Mechanical & Aerospace Engineering Problems	3
				MAE Technical Elective**	3
Total			Total		
15			17		

Senior Year:					
MAE 404	Experimental Engineering Lab	2	MAE 443	Capstone Design Project II	2
MAE 412	System Dynamics	3	MAE 415	Automatic Control	3
MAE 441	Design of Fluid & Thermal Systems	3		MAE Technical Elective**	3
MAE 442	Capstone Design Project I	1		Humanities and Arts Cognate (HA	3
	Energy Elective #	3		Elective)*	
	People and Society Cognate (PS	3		People and Society Cognate (Adv.	3
	Elective)*			PS Elective)*	
	Humanities and Arts Cognate (Adv.	3			
	HA Elective)*				
Total			Total		
18			14		

* 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 or ECO 212

** MAE Technical Electives are selected from courses at the 300 level or above offered by the Department of Mechanical & Aerospace Engineering.

Energy Elective is selected with the approval of the advisor from the following list MAE 408, MAE 420, MAE 503, MAE 506, MAE 509, MAE 510, MAE 528, MAE 540, and MAE 570