

UNIVERSITY OF MIAMI
DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING
AEROSPACE ENGINEERING CONCENTRATION

129 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 Lab	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> ECO 212	Economic Principles and Problems (People and Society Cognate) (PS Elective)*	3		Humanities and Arts Cognate (HA Elective)*	3
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 371	Aerodynamics	3
Total			Total		
15			17		

Senior Year:					
MAE 404	Experimental Engineering Lab	2	MAE 415	Automatic Control	3
MAE 412	System Dynamics	3	MAE 443	Capstone Design Project II	2
MAE 441	Design of Fluid & Thermal Systems	3	MAE 470	Introduction to Aerospace Structures	3
MAE 442	Capstone Design Project I	1		People and Society Cognate (PS Elective)*	3
MAE 471	Flight Dynamics	3		Humanities and Arts Cognate (HA Elective)*	3
MAE 570	Aero Propulsion	3		People and Society Cognate (Adv. PS Elective)*	3
	Humanities and Arts Cognate (Adv. HA Elective)*	3			
Total			Total		
18			17		

* 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