

**UNIVERSITY OF MIAMI**  
**DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING**  
**BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING**  
*126 Credits*  
*2015 - 2016*

<b>Freshman Year:</b>					
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
<b>Total</b>			<b>Total</b>		
<b>14</b>			<b>16</b>		

<b>Sophomore Year:</b>					
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	ECE 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
	People and Society Cognate*	3		Humanities and Arts Cognate*	3
<b>Total</b>			<b>Total</b>		
<b>16</b>			<b>16</b>		

<b>Junior Year:</b>					
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
<b>Total</b>			<b>Total</b>		
<b>15</b>			<b>17</b>		

<b>Senior Year:</b>					
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*	3
	Technical Elective***	3		People and Society Cognate*	3
	People and Society Cognate*	3			
	Humanities and Arts Cognate*	3			
<b>Total</b>			<b>Total</b>		
<b>18</b>			<b>14</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).

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

\*\*\* Technical Electives are advanced courses in mathematics, science or engineering approved by the Faculty Advisor, as appropriate for individual objectives