

UNIVERSITY OF MIAMI
COLLEGE OF ENGINEERING
BACHELOR OF SCIENCE IN ENGINEERING SCIENCE
123-124 Credits
2015 - 2016

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	ECE 201	Electrical Circuit Theory	3
CHM 111	Principles of Chemistry I	3	MAE 202	Dynamics	3
CHM 113	Chemistry Laboratory I	1	CHM 112	Principles of Chemistry II	3
MTH 210	Introduction to Linear Algebra	3	CHM 114	Chemistry Laboratory II	1
PHY 207	University Physics III	3	MTH 310	Multivariable Calculus	3
PHY 209	University Physics III Lab	1		Humanities and Arts Cognate (HA Elective)*	3
	People and Society Cognate (PS Elective)*	3			
Total			Total		
17			16		

Junior Year:					
IEN 311	Applied Probability & Statistics	3	ECE 204	Electrical Circuits Laboratory	1
MAE 303	Thermodynamics I	3	MAE 241	Measurements Laboratory	3
MTH 311	Ordinary Differential Equations	3	MAE 301	Engineering Materials Science	3
PHY 350	Intermediate Electricity and Magnetism	3	MAE 309	Fluid Mechanics	3
	People and Society Cognate (PS Elective)*	3	CHM 201	Organic Chemistry I (Lecture)	3
				Humanities and Arts Cognate (HA Elective)*	3
Total			Total		
15			16		

Senior Year:					
MAE 302	Mechanical Behavior of Materials	3	ECE 305	Electronics I	3
MAE 412	System Dynamics	3	PHY 351	Intermediate Electricity and Magnetism II	3
			CHM202	Organic Chemistry II (Lecture)	3
CHM 360	Physical Chemistry I(Lecture)	3	CHM205	Organic Chemistry I (Lab)	1
PHY 360	Introduction to Modern Physics			Applied Elective***	3
	Humanities and Arts Cognate (Adv. HA Elective)*	3		Technical Elective**	3
				People and Society Cognate (Adv. PS Elective)*	3
Total			Total		
15			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).

**Technical Electives are advanced courses in mathematics, science or engineering, approved by the Faculty Advisor.

***Applied electives are advanced courses selected in coordination with the Faculty Advisor and require his/her approval.