

UNIVERSITY OF MIAMI
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING
SOFTWARE ENGINEERING OPTION

127 Credits
2017 - 2018

Freshman Year:					
ECE 111	Introduction to Engineering I	3	ECE 112	Introduction to Engineering II	2
ECE 118	Introduction To Programming	3	ECE 218	Data Structures	3
ENG 105	English Composition I	3	ENG 107	English Composition II: Science and Technology	3
MTH 151	Calculus I for Engineers	5	MTH 162	Calculus II	4
			PHY 205	University Physics I	3
Total			Total		
14			15		

Sophomore Year:					
ECE 211	Logic Design	3	ECE 201	Electrical Circuit Theory	3
ECE 318	Algorithms	3	ECE 212	Processors: Hardware, Software and Interfacing	3
MTH 210	Introduction to Linear Algebra	3	ECE 310 or IEN310	Introduction to Engineering Probability	3
PHY 206 or PHY 207	University Physics II or University Physics III	3	ECE 315	Digital Design Laboratory	1
PHY 208 or PHY 209	University Physics Lab II or University Physics Lab III	1	MTH 309	Discrete Mathematics	3
	PS Cognate ¹	3		HA Cognate ¹	3
Total			Total		
16			16		

Junior Year:					
ECE 202	Electronics I	3	ECE 316	Structured Digital Design	1
ECE 203	Electrical Circuits Lab	1	ECE 413	Software Design and Testing	3
ECE 322	Systems Programming	3	ECE 421 or CSC 421	Comp. Operating Systems or Principles of Comp. Operating Sys.	3
ECE 412	Software Architecture	3	ECE 467 or CSC 423	Database Design & Management or Database Systems ²	3
	Basic Science Elective ¹	3		Basic Science Elective ¹	3
	Basic Science Elective Lab ¹	1		HA Cognate ¹	3
	PS Cognate ¹	3			
Total			Total		
17			16		

Senior Year:					
ECE 414	Computer Organization & Design	3	ECE 470	Network Client - Server Programming	3
ECE 417	Embedded Systems	3	ECE 482	Senior Project II	2
ECE 481	Senior Project I ³	1	CSC 419	Programming Languages	3
CSC 317	Algorithms & Data Structures	3		Software Engineering Tech. Elective ¹	3
	Software Engineering Tech. Elective ¹	3		Software Engineering Tech. Elective ¹	3
	PS Cognate ¹	3		HA Cognate ¹	3
Total			Total		
16			17		

¹ Students must complete a minimum of 1 People and Society (PS) cognate and 1 Humanities and Arts (HA) cognate, to be selected from the list of available cognates. Each cognate should be a minimum of 3 courses (minimum of 9 credits). See description of electives under the ECE Section in the UM Bulletin

² With the approval of faculty adviser

³ Offered only in Fall Semester

Students must earn at least 15 credits in Computer Science, and at least 32 credits in Mathematics & Sciences

All ECE courses which are prerequisites for subsequent ECE courses require a grade of C- or better.
 All ECE courses at the 300 level or above must be taken at UM.