

**Computer Engineering**  
**Bachelor of Science Degree**  
Curriculum Year 2018-2019

FRESHMAN YEAR

Fall Semester		Cr	Term Completed	Spring Semester		Cr	Term Completed
ENGR 1020/1021	Engineering Disciplines and Skills <sup>1</sup>	2		ENGR 1410/1411	Programming and Problem Solving <sup>3</sup>	3	
CH 1010/1011	General Chemistry	4		MATH 1080	Calculus II	4	
ENGL 1030	Composition and Rhetoric	3		PHYS 1220	Physics with Calculus I	3	
MATH 1060	Calculus I	4			Humanities/Social Science Req. <sup>2</sup>	3	
	Humanities/Social Science Req. <sup>2</sup>	3			Humanities/Social Science Req. <sup>2</sup>	3	
		16				16	

SOPHOMORE YEAR

Fall Semester		Cr	Term Completed	Spring Semester		Cr	Term Completed
CPSC 1110/1111	Intro to Programming in C	3		ECE 2120	Electrical Engineering Lab II	1	
ECE 2010	Logic and Computing Devices	2		ECE 2220	Systems Programming	3	
ECE 2020	Electric Circuits I	3		ECE 2620	Electric Circuits II	3	
ECE 2090	Logic Lab	1		ECE 2720	Computer Organization	3	
ECE 2110	Electrical Engineering Lab I	1		ECE 2730	Computer Organization Lab	1	
MATH 2060	Calculus III	4		MATH 2080	Differential Equations	4	
PHYS 2210	Physics with Calculus II	3					
		17				15	

JUNIOR YEAR

Fall Semester		Cr	Term Completed	Spring Semester		Cr	Term Completed
ECE 2230	Computer Systems Engineering	3		ECE 3170	Random Signal Analysis	3	
ECE 3110	Electrical Engineering Lab III	1		ECE 3220	Introduction to Operating Systems	3	
ECE 3200	Electronics I	3		ECE 3270	Digital Computer Design	3	
ECE 3300	Signals, Systems & Transforms	3		ECE 3520	Programming Systems	3	
ECE 3710	Microcontroller Interfacing	3		MATH 4190	Discrete Mathematics	3	
ECE 3720	Microcontroller Interfacing Lab	1					
MATH 3110	Linear Algebra	3					
		17				15	

SENIOR YEAR

Fall Semester		Cr	Term Completed	Spring Semester		Cr	Term Completed
ECE 4090	Intro to Linear Control Systems	3		ECE 4960	Integrated Systems Design II	2	
ECE 4950/4951	Integrated Systems Design I	2			Humanities/Social Science Req. <sup>2</sup>	3	
ENGL 3140	Technical Writing	3			CpE Technical Elective <sup>4</sup>	3	
	CpE Technical Elective <sup>4</sup>	3			CpE Technical Elective <sup>4</sup>	3	
	CpE Probability & Statistics Req. <sup>5</sup>	3			Special Requirement <sup>7</sup>	3	
	Communications Requirement <sup>6</sup>	3					
		17				14	

<sup>1</sup> Or ENGR 1050/1060.

<sup>2</sup> See General Education section of the *Undergraduate Announcements*. Six of these credit hours must also satisfy General Education Cross-Cultural Awareness and Science and Technology in Society Requirements.

<sup>3</sup> Or ENGR 1070/1080/1090.

<sup>4</sup> Select from the list on page 2 of this document.

<sup>5</sup> ECE 4270 (Communications Systems), ECE 4300 (Digital Communications) or ECE 4400 (Performance Analysis of Local Computer Networks).

<sup>6</sup> COMM 1500/1501 or COMM 2500/2501.

<sup>7</sup> Special Requirement Options:

- a. A 3-credit approved Humanities/Social Sciences course (see listing here: [www.clemson.edu/cecas/current-students/humanities\\_policy.html](http://www.clemson.edu/cecas/current-students/humanities_policy.html)); or
- b. An additional 3-credit, 4000-level course from the EE Technical Elective List or the CpE Technical Elective List; or
- c. An additional 3-credit MATH course from the following list: MATH 4120 (Intro to Modern Algebra), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), or MATH 4530 (Advanced Calculus); or
- d. ELE 3010 Executive Leadership and Entrepreneurship I (prerequisite MGT 2010).