Electrical Engineering
Bachelor of Science Degree

Curriculum Year 2021-2022

FRESHMAN YEAR

Fall Semester		Cr	Term Completed		Spring Semester		Cr	Term Completed	
ENGR 1020/1021	Engineering Disciplines and Skills[1]	2			ENGR 1410/1411	Programming and Problem Solving[3]	3		
CH 1010/1011	General Chemistry + Lab	4			CH 1020/1021	General Chemistry II + Lab	4		
ENGL 1030	Composition and Rhetoric	3			MATH 1080	Calculus II	4		
MATH 1060	Calculus I	4			PHYS 1220	Physics with Calculus I	3		
	Humanities/Social Science Req.[2]	3				Humanities/Social Science Req.[2]	3		
		16					17		

SOPHOMORE YEAR

Fall Semester		Cr	Term Completed		Spring Semester		Cr	Term Completed	
CPSC 1110/1111	Intro to Programming in C + Lab	3			ECE 2120	Electrical Engineering Lab II	1		
ECE 2010	Logic and Computing Devices	3			ECE 2620	Electric Circuits II	3		
ECE 2020	Electric Circuits I	3			ECE 2720	Computer Organization	3		
ECE 2090	Logic Lab	1			ECE 2730	Computer Organization Lab	1		
ECE 2110	Electrical Engineering Lab I	1			MATH 2080	Differential Equations	4		
MATH 2060	Calculus III	4				Humanities/Social Science Req.[2, 4]	3		
PHYS 2210	Physics with Calculus II	3							
		18					15		

JUNIOR YEAR

Fall Semester		Cr	Term Completed		Spring Semester		Cr	Term Completed	
ECE 3110	Electrical Engineering Lab III	1			ECE 3120	Electrical Engineering Lab IV	1		
ECE 3200	Electronics I	3			ECE 3170	Random Signal Analysis	3		
ECE 3300	Signals, Systems and Transforms	3			ECE 3210	Electronics II	3		
ECE 3710	Microcontroller Interfacing	3			ECE 3600	Electric Power Engineering	3		
ECE 3720	Microcontroller Interfacing Lab	1			ECE 3810	Fields, Waves and Circuits	3		
ECE 3800	Electromagnetics	3			ENGL 3140	Technical Writing	3		
	Advanced Mathematics Req.[5]	3							
		17					16		

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 4270	Communications Systems	3				Humanities/Social Science Req.[2]	3		
ECE 4950/4951	Integrated Systems Design I	2				EE Technical Elective[6]	3		
	EE Technical Elective[6]	3				EE Technical Elective[6, 8]	3		
	Communications Requirement[7]	3				Special Requirement[9]	3		
		14					14		

[1] Or ENGR 1050/1060.

[2] 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. To comply with the South Carolina REACH ACT, all undergraduate students who enter the university during summer 2021 or afterward must pass one of HIST 1010, POSC 1010, and POSC 1030. Additional courses may be approved which can satisfy this requirement. Successful completion of coursework in compliance with the REACH ACT is required for graduation.

[3] Or ENGR 1070/1080/1090.

[4] Or EE Technical Elective (ECE 2220 Systems Programming Concepts for Computer Engineering).

[5] MATH 3650, MATH 4190*, MATH 4340, MATH 4400*, MATH 4410** or STAT 4110.

Notes: *requires MATH 3110 as prereq; **MATH 4000 is prereq. Students will need override to use ECE 3170 in place of MATH 4000. **See MATH Dept.**

[6] Select from approved Technical Elective listing found on the ECE website https://www.clemson.edu/cecas/departments/ece/resources/undergrad_resources/curriculum.html.

[7] COMM 1500/1501 *or* COMM 2500/2501.

[8] Or Humanities/Social Science Req. if ECE 2220 taken in sophomore year.

[9] Special Requirement Options:

a. A 3-credit approved Humanities/Social Sciences course (see listing in the current Undergraduate Catalog: http://catalog.clemson.edu/); 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 3110 (Linear Algebra), MATH 4120 (Intro to Modern Algebra), MATH 4190 (Discrete Math), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), MATH 4530 (Advanced Calculus I), MATH 4540 (Advanced Calculus II).

Updated 14 June 2021