Electrical Engineering
Bachelor of Science
Curriculum Year 2022-2023

FRESHMAN YEAR

Fall Semester		Cr	Term Completed		Spring Semester		Cr	Term Completed	
ENGR 1020/1021	Engineering Disciplines and Skills[1]	3			ENGR 1410/1411	Programming and Problem Solving[4]	3		
CH 1010/1011	General Chemistry	4			CH 1020/1021	General Chemistry II + Lab	4		
ENGL 1030/1031	Composition and Rhetoric	3			MATH 1080	Calculus II	4		
MATH 1060	Calculus I[2]	4			PHYS 1220	Physics with Calculus I	3		
	Arts & Humanities/Social Science Req.[3]	3				Arts & Humanities/Social Science Req.[3]	3		
		17					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				Arts & Humanities/Social Science Req.[3, 5]	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[7]	3		
	Advanced Mathematics Req.[6]	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				Arts & Humanities/Social Science Req.[3]	3		
ECE 4950/4951	Integrated Systems Design I	2				EE Technical Elective[8]	3		
	EE Technical Elective[8]	3				EE Technical Elective[8, 10]	3		
	Communications Requirement[9]	3				Special Requirement[11]	3		
		14					14		

Total credit hours = 128

[1] Or ENGR 1050/1060 or ENGR 1510/1520. Satisfies three credits of the Global Challenges requirement if met by ENGR 1020 and taken at Clemson. (Otherwise, three credits of the Global Challenges requirement must be met with three additional credits.)

[2] Or MATH 1040/1070.

[3] See General Education section of the *Undergraduate Announcements*. Three of these credits must also satisfy the South Carolina REACH Act Requirement (if the requirement is not already satisfied upon admission to Clemson.)

[4] Or ENGR 1070/1080/1090 or ENGR 1640.

[5] Students may choose to take the EE Technical Elective ECE 2220 at this time and take the Arts & Humanities/Social Science Req. in the senior year (swapping the courses).

[6] MATH 3650 or MATH 4190* or MATH 4340 or MATH 4400* or MATH 4410 or STAT 4110. *Requires MATH 3110 as prerequisite.

[7] Or AS 4090.

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

[9] COMM 1500/1501 or COMM 2500/2501 or HON 1950 or HON 2230 or AS 3090/3100/4090/4100 or ML 1010/1020.

[10] Students may choose to take an Arts & Humanities/Social Science Req. at this time and take the EE Technical Elective ECE 2220 in the sophomore year (swapping the courses).

[11] Three additional Global Challenges credits at the 3000 or 4000 level with a course prefix other than ENGR; or, if the six Global Challenges credits are satisfied by other requirements such as ENGR 1020 and a qualifying EE Technical Elective, any of the following: (1) A 3-credit approved Humanities/Social Sciences course (see listing in the current Undergraduate Catalog: http://catalog.clemson.edu/); (2) An additional 3-credit, 4000-level course from the EE Technical Elective List or the CpE Technical Elective List; (3) MATH 3110 or MATH 4120 or MATH 4190 or MATH 4340 or MATH 4350 or MATH 4400 or MATH 4410 or MATH 4530 or MATH 4540.

Updated 23 May 2022