Electrical Engineering/Computer Engineering
Double Major Bachelor of Science Degree
Curriculum Year 2025-2026

Clemson University defines a double major as a single degree (single graduation). The student is required to meet all the curricular requirements of both majors. A double major in Electrical Engineering and Computer Engineering only requires 13 hours beyond the requirements of one of the two majors, less than adding a minor. This document shows how to complete the double major without taking any summer courses. Summer courses can optionally be taken to reduce the course loads in fall and spring semesters.

FRESHMAN YEAR

First Semester		Cr	Term Completed		Second Semester		Cr	Term Completed	
CH 1010/1011	General Chemistry and Lab[1]	4			ENGR 1410/1411	Programming and Problem Solving[1,5]	3		
ENGL 1030/1031	Composition and Rhetoric[1]	3			MATH 1080	Calculus of One Variable II[1]	4		
ENGR 1020/1021	Engineering Disciplines and Skills[1,2,8]	3			PHYS 1220	Physics with Calculus I[1]	3		
MATH 1060	Calculus of One Variable I[1,3]	4				General Engineering Req.[7]	3-4		
	Arts & Humanities/Social Science Req.[4]	3				Arts & Humanities/Social Science Req.[4]	3		
		17					16-17		

SOPHOMORE YEAR

First Semester		Cr	Term Completed		Second Semester		Cr	Term Completed	
ECE 2000	Introduction to ECE	1			ECE 2090	Logic and Computing Devices Lab	1		
ECE 2010	Logic and Computing Devices[1]	3			ECE 2120	Electric Circuits II Lab[1]	1		
ECE 2020	Electric Circuits I[1]	3			ECE 2220	C and Unix Programming for ECE[1]	3		
ECE 2110	Electric Circuits I Lab[1]	1			ECE 2620	Electric Circuits II[1]	3		
ECE 2210	Python Programming for ECE[1]	3			ECE 2720	Computer Organization[1]	3		
MATH 2060	Calculus of Several Variables[1]	4			MATH 2080	Intro to Ordinary Differential Equations[1]	4		
PHYS 2210	Physics with Calculus II[1]	3			MATH 3110	Linear Algebra[1]	3		
		18					18		

JUNIOR YEAR

First Semester		Cr	Term Completed		Second Semester		Cr	Term Completed	
ECE 2230	Data Structures and Algorithms for ECE[1]	3			ECE 3120	Electronics II Lab	1		
ECE 3110	Electronics I Lab[1]	1			ECE 3170	Random Signal Analysis[1]	3		
ECE 3200	Electronics I[1]	3			ECE 3210	Electronics II[1]	3		
ECE 3300	Signals, Systems and Transforms[1]	3			ECE 3270/3271	Digital Computer Design[1]	4		
ECE 3710	Microcontroller Interfacing[1]	3			ECE 3600	Electric Power Engineering[1]	3		
ECE 3800	Electromagnetics[1]	3			ECE 3720	Microcontroller Interfacing Lab	1		
	Oral Communication Requirement[4]	3			MATH 4190	Discrete Mathematical Structures I[1]	3		
		19					18		

SENIOR YEAR

First Semester		Cr	Term Completed		Second Semester		Cr	Term Completed	
ECE 3220	Introduction to Operating Systems[1]	3			ECE 4270	Communication Systems	3		
ECE 3520	Programming Systems[1]	3			ECE 4960	Integrated System Design II[8]	3		
ECE 3810	Fields, Waves, and Circuits[1]	3				Arts & Humanities/Social Science Req.[4]	3		
ECE 4090	Introduction to Linear Control Systems[1]	3				Arts & Humanities/Social Science Req.[4]	3		
ECE 4950/4951	Integrated System Design I[1]	2				EE-CpE Technical Requirement[6]	3		
	EE-CpE Technical Requirement[6]	3				EE-CpE Technical Requirement[6]	3		
		17					18		

[1] This course must be passed with a grade of C or better to transfer into Computer Engineering from General Engineering or another major or to satisfy later course prerequisite requirements. Because the prerequisites for ECE 4950 and ECE 4960 are listed as one group of courses "or" another group, it is possible for some of these courses to only require a D or better. But one entire group of courses must all meet the C or better requirement; no mixing among the two groups is permitted.

[2] The combination of ENGR 1050 and ENGR 1060 or the combination of ENGR 1510 and 1520 may be substituted for ENGR 1020.

[3] Depending on a student's math placement based on the Clemson Mathematics Placement Test score, ACT mathematics score, or SAT mathematics score, MATH 1040 and MATH 1070 may be substituted for MATH 1060; or the student may be required to take MATH 1030 or MATH 1050 before enrolling in MATH 1060.

[4] See General Education Requirements. Three General Education credits must also satisfy the South Carolina REACH Act Requirement. See the South Carolina REACH Act Requirement in Academic Regulations. Some students meet this requirement upon admission to Clemson. Check DegreeWorks for your situation. For the Oral Communication Requirement, most students take COMM 1500/1501 or COMM 2500/2501.

[5] ENGR 1640 or the combination ENGR 1070, ENGR 1080, and ENGR 1090 may be substituted for ENGR 1410.

[6] Nine credits selected from BIOE 3700*, BIOE 4310*, BIOE 4350*, BIOE 4710*, ECAS 4960*, ECE 4050+, ECE 4100, ECE 4160*, ECE 4290, ECE 4300, ECE 4380, ECE 4400, ECE 4420, ECE 4550, ECE 4590*, ECE 4600, ECE 4670, ECE 4680, ECE 4730, ECE 4910+, ECE 4920+, ECE 4930+, ECE 4980+, and ECE 4990+. A maximum of six credits of courses marked with an asterisk and a maximum of three credits of courses marked with a plus may be used to satisfy this requirement.

[7] Option 1 (4 cr.): CH 1020/1021. Option 2 (3 cr.): PHYS 1240 and either ENGR 2080/2081 or ENGR 2100/2101.

[8] This course normally satisfies three credits of the Global Challenges requirement. Check DegreeWorks for your situation. (Otherwise, three credits of the Global Challenges requirement must be met with three additional credits.)

(more on next page)

NOTES:

1. If a student has completed all of the courses listed in the General Engineering core, in order to register for a complete schedule, they may need to consider registering for courses required in the engineering degree program they intend to pursue. Students should see the list of possible courses in the Major Specific Coursework section of the General Engineering Program entry. Major specific coursework is coursework outside the General Engineering core that will count towards an engineering major once a student has officially changed their major. Note that not all courses will count towards every engineering major. The courses listed in the Major Specific Coursework should not be considered alternatives or substitutes for the courses listed in the General Engineering core. If a student takes one of these other courses in place of the courses specifically listed in the General Engineering core, they could delay their eligibility to transfer from General Engineering into one of the degree-granting programs in engineering.

2. To transfer from General Engineering or other majors into the Computer Engineering program, students must have a cumulative grade-point average of 2.00 in courses taken at Clemson and must have earned a C or better in each course of the General Engineering Core.

3. A student is allowed to enroll in ECE courses (excluding ECE 2070, ECE 2080, ECE 3080) only when all prerequisites have been passed with a grade of C or better.

4. All Electrical Engineering/Computer Engineering double major students must have a cumulative grade-point average of 2.00 to enroll in any 3000- or 4000-level ECE course. If this condition is not met each term, enrollment in these upper-level courses may be restricted. Students must fill out a Variance Request form which will be reviewed by the Departmental Variance Committee. Strict adherence to the committee decision is required.

5. No student may exceed a maximum of two attempts, excluding a W, to complete successfully any ECE course. A third and final attempt will only be considered by a written Variance Request to be reviewed by the Departmental Variance Committee before the deadline to add a course in a subsequent term. Students who do not complete a Variance or who have a Variance denied are not eligible to continue in the Computer Engineering major. Strict adherence to the committee decision is required.

6. Depending on a student's math placement, they may be invited to take part in the General Engineering Learning Community where they complete the following courses: ENGR 1000, ENGR 1010, ENGR 1100, ENGR 1110, ENGR 1510, ENGR 1520, and ENGR 1640. The combination of ENGR 1510 and ENGR 1520 may be substituted for ENGR 1020. ENGR 1640 may be substituted for ENGR 1410.

Updated 10 Sept 2025