

Electrical Engineering

Bachelor of Science Degree

Curriculum Year 2024-2025

FRESHMAN YEAR

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

SOPHOMORE YEAR

First Semester		Cr	Term Completed	Second Semester		Cr	Term Completed
ECE 2010	Logic and Computing Devices ¹	3		ECE 2000	Introduction to ECE	1	
ECE 2020	Electric Circuits I ¹	3		ECE 2120	Electrical Engineering Lab II ¹	1	
ECE 2090	Logic and Computing Devices Lab	1		ECE 2620	Electric Circuits II ¹	3	
ECE 2110	Electrical Engineering Lab I ¹	1		ECE 2720	Computer Organization ¹	3	
ECE 2210	Python Programming for ECE ¹	3		ECE 2730	Computer Organization Lab	1	
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			Arts & Humanities/Social Science Req. ⁴	3	
		18				16	

JUNIOR YEAR

First Semester		Cr	Term Completed	Second Semester		Cr	Term Completed
ECE 3110	Electrical Engineering Lab III ¹	1		ECE 3120	Electrical Engineering Lab IV	1	
ECE 3200	Electronics I ¹	3		ECE 3170	Random Signal Analysis ¹	3	
ECE 3300	Signals, Systems and Transforms ¹	3		ECE 3210	Electronics II ¹	3	
ECE 3710	Microcontroller Interfacing ¹	3		ECE 3600	Electric Power Engineering ¹	3	
ECE 3720	Microcontroller Interfacing Lab	1		ECE 3810	Fields, Waves and Circuits ¹	3	
ECE 3800	Electromagnetics ¹	3		PCID 3140	Technical Communication ⁷	3	
	Advanced Mathematics Req. ⁶	3					
		17				16	

SENIOR YEAR

First Semester		Cr	Term Completed	Second Semester		Cr	Term Completed
ECE 4090	Intro to Linear Control Systems ¹	3		ECE 4960	Integrated System Design II	2	
ECE 4270	Communications Systems	3			Arts & Humanities/Social Science Req. ⁴	3	
ECE 4950/4951	Integrated System Design I ¹	2			EE Technical Requirement ⁸	3	
	EE Technical Requirement ⁸	3			EE Technical Requirement ⁸	3	
	Oral Communication Requirement ⁴	3			GLCH/Special Requirement ⁹	3	
		14				14	

¹ This course must be passed with a grade of C or better to transfer into Electrical Engineering from General Engineering or another major or to satisfy later course requirements.

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

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 Select from MATH 3650, MATH 4190, MATH 4340, MATH 4400, MATH 4410, and STAT 4110. (MATH 4190 and MATH 4400 require MATH 3110 as prerequisite.)

⁷ ENGL 3140 or the combination AS 3090, AS 3100, and AS 4090 may be substituted for PCID 3140.

⁸ Nine credits selected from BIOE 3700, BIOE 4310, BIOE 4350, BIOE 4710, ECE 2220, ECE 4040, ECE 4050*, ECE 4060, ECE 4080, ECE 4100, ECE 4160, ECE 4180, ECE 4190, ECE 4200, ECE 4220, ECE 4290, ECE 4300, ECE 4320, ECE 4330, ECE 4340, ECE 4350, ECE 4360, ECE 4370, ECE 4380, ECE 4400, ECE 4420, ECE 4460, ECE 4550, ECE 4570, ECE 4580, ECE 4590, ECE 4600, ECE 4610, ECE 4670, ECE 4680, ECE 4700, ECE 4710, ECE 4730, ECE 4910*, ECE 4920*, ECE 4930*, ECE 4980*, ECE 4990*, and ME 3100. A maximum of three credits of courses marked with an asterisk may be used to satisfy this requirement. See [EE Technical Requirements](#) for more information.

Students are strongly encouraged to make ECE 2220 one of their EE technical electives.

⁹ Select a 3000- or 4000-level Global Challenges course with a prefix other than ENGR. If the six credits of the Global Challenges requirement are satisfied by other requirements such as the Electrical or Computer Engineering Technical requirement, select any of the following: Three additional credits from [Humanities and Social Sciences for Engineering Curricula](#); or any additional three-credit, 4000-level course from the list of courses in footnote 8 above; or a course selected from the following list: ECE 4310, ECE 4490, ECE 4740; or one additional course selected from MATH 3110, MATH 4120, MATH 4190, MATH 4340, MATH 4350, MATH 4400, MATH 4410, MATH 4530, or MATH 4540.

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 Electrical 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 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 Electrical 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 June 2024

Electrical Engineering

Bachelor of Science

Curriculum Year 2023-2024

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 the cluster of AS 3090, AS 3100 and AS 4090 may be substituted.

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.

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.

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).

Electrical Engineering

Bachelor of Science Degree

Curriculum Year 2020-2021

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	4		CH 1020/1021	General Chemistry II	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	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.

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).

Electrical Engineering
Bachelor of Science Degree
Curriculum Year 2019-2020

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	4		CH 1020/1021	General Chemistry II	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	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 3600	Electric Power Engineering	3		ECE 3710	Microcontroller Interfacing	3	
ECE 3800	Electromagnetics	3		ECE 3720	Microcontroller Interfacing Lab	1	
	Advanced Mathematics Req. ⁵	3		ECE 3810	Fields, Waves and Circuits	3	
				ENGL 3140	Technical Writing	3	
		16				17	

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.

³ Or ENGR 1070/1080/1090.

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

⁵ MATH 4190 (Discrete Math. Structures), MATH 4340 (Adv. Engr. Math), MATH 4350 (Complex Variables), MATH 4530 (Adv. Calc. I), or MATH 4540 (Adv. Calc. II).

⁶ Select from the list on page 2 of this document.

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 here: 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 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); or
- d. ELE 3010 Executive Leadership and Entrepreneurship I (prerequisite MGT 2010).

Electrical 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 ¹	2		ENGR 1410/1411	Programming and Problem Solving ³	3	
CH 1010/1011	General Chemistry	4		CH 1020/1021	General Chemistry II	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	3		ECE 2120	Electrical Engineering Lab II	1	
ECE 2010	Logic and Computing Devices	2		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					
			17				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 380	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.

³ Or ENGR 1070/1080/1090.

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

⁵ MATH 4190 (Discrete Math. Structures), MATH 4340 (Adv. Engr. Math), MATH 4350 (Complex Variables), MATH 4530 (Adv. Calc. I), or MATH 4540 (Adv. Calc. II).

⁶ Select from the list on page 2 of this document.

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 here: 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 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); or
- d. ELE 3010 Executive Leadership and Entrepreneurship I (prerequisite MGT 2010).

Electrical Engineering
Bachelor of Science Degree
Curriculum Year 2017-2018

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	4		CH 1020/1021	General Chemistry II	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	3		ECE 2120	Electrical Engineering Lab II	1	
ECE 2010	Logic and Computing Devices	2		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					
			17				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.

³ Or ENGR 1070/1080/1090.

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

⁵ MATH 4190 (Discrete Math. Structures), MATH 4340 (Adv. Engr. Math), MATH 4350 (Complex Variables), MATH 4530 (Adv. Calc. I), or MATH 4540 (Adv. Calc. II).

⁶ Select from the list on page 2 of this document.

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 here: 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 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); or
- d. ELE 3010 Executive Leadership and Entrepreneurship I (prerequisite MGT 2010).

Electrical Engineering
Bachelor of Science
Degree Curriculum Year
2016-2017

Fall Semester		Cr	FRESHMAN YEAR		Cr	Term Completed
			Term Completed	Spring Semester		
ENGR 1020/1021	Engineering Disciplines and Skills ¹	2		ENGR 1410/1411	Programming and Problem Solving ³	3
CH 1010/1011	General Chemistry	4		CH 1020/1021	General Chemistry II	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
			Term Completed	Spring Semester			
CPSC 1110/1111	Intro to Programming in C	3		ECE 2120	Electrical Engineering Lab II	1	
ECE 2010	Logic and Computing Devices	2		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					
		17					15

JUNIOR YEAR

Fall Semester		Cr	Term Completed		Spring Semester	Cr	Term Completed
			Term Completed	Spring Semester			
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
			Term Completed	Spring Semester			
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.

³ Or ENGR 1070/1080/1090.

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

⁵ MATH 4190 (Discrete Math. Structures), MATH 4340 (Adv. Engr. Math), MATH 4350 (Complex Variables), MATH 4530 (Adv. Calc. I), or MATH 4540 (Adv. Calc. II).

⁶ Select from the list on page 2 of this document.

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 here: 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 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); or
- d. ELE 3010 Executive Leadership and Entrepreneurship I (prerequisite MGT 2010).

Electrical Engineering

Bachelor of Science Degree

Curriculum year 2014-2016

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1050 Engr Discipline & Skills I	1		CH 1020 & 1021 Gen Chemistry II	4	
ENGR 1060 Engr Discipline & Skills II	1		ENGR 1070 Program & Prob Slvng I	1	
CH 1010 & 1011 General Chemistry	4		ENGR 1080 Program & Prob Slvng II	1	
ENGL 1030 Accelerated Composition	3		ENGR 1090 Program & Prob Slvng III	1	
MATH 1060 Calculus I	4		Hum/Soc Sci req	3	
Hum/Soc Sci req	3		MATH 1080 Calculus II	4	
	16		PHYS 1220 Physics with Calculus I	3	
				17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
CPSC 1110 & 1111 C/C++	3		ECE 2120 Electrical Engr Lab II	1	
ECE 2010 Logic & Computing Devices	2		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 Org Lab	1	
ECE 2110 Electrical Engineering Lab I	1		MATH 2080 Differential Equations	4	
MATH 2060 Calculus III	4		Hum/Soc Sci req OR EE Tech Elec	3	
PHYS 2210 Physics with Calculus II	3		[ECE 2220 Sys Progrmng]		
	17			15	

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Electrical Engr Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals, Sys, & Transforms	3		ECE 3210 Electronics II	3	
ECE 3600 Electric Power Engineering	3		ECE 3710 Microcntrllr Interfacing	3	
ECE 3800 Electromagnetics	3		ECE 3720 Microcontroller Lab	1	
Adv. Mathematics Elective ¹	3		ECE 3810 Fields, Waves & Circuits	3	
	16		ENGL 3140 Technical writing	3	
				17	

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 &1501 or COMM 2500 &2501	3		ECE 4960 Systems Design II	2	
ECE 4090 Cont &Discrete Sys Design	3		EE Technical Elective OR	3	
ECE 4270 Communications Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Technical Elective	3	
EE Technical Elective	3		Hum/Soc Sci req	3	
	14		Special Elective ²	3	
				14	

NOTES:

1. Advanced Mathematics Elective Options: MATH 4190, MATH 4340, MATH 4350, MATH 4530, or MATH 4540.
2. Special Elective Options:
 - a. 3 additional credits of approved Humanities/Social Science courses; or
 - b. ELE 3010 - Executive Leadership and Entrepreneurship I or ELE 4010 - Executive Leadership and Entrepreneurship II; or
 - c. An additional 3-credit, 400-level course from the EE Technical Elective List or the CpE Technical Elective List; or
 - d. An additional 3-credit MATH course from the following list: MATH 3110 (Linear Algebra), MATH 4120 (Intro. to Modern Algebra), MATH 4190 (Discrete Math I), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus I), MATH 4540 (Advanced Calculus II).

Electrical Engineering
Bachelor of Science Degree
Curriculum year 2013-2014

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1020 Intro Engr	2		CH 1020 & 1021 Gen Chemistry II	4	
CH 1010 & 1011 Gen Chemistry I	4		ENGR 1410 & 1411 Problem solving	3	
ENGL 1030 Comp I	3		MATH 1080 Calc II	4	
MATH 1060 Calc I	4		PHYS 1220 Phys I	3	
Hum/Soc Sci req	3		Hum/Soc Sci req	3	
	16			17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
CPSC 1110 & 1111 C/C++	3		ECE 2120 Circuits Lab II	1	
ECE 2010 Logic	2		ECE 2620 Circuits II	3	
ECE 2020 Circuits I	3		ECE 2720 Comp Org	3	
ECE 2090 Logic Lab	1		ECE 2730 Comp Org Lab	1	
ECE 2110 Circuits Lab I	1		MATH 2080 Diff Eq	4	
MATH 2060 Calc III	4		Hum/Soc Sci req OR EE Tech Elec	3	
PHYS 2210 Physics II	3		[ECE 2220 Sys Progrmng]		
	17			15	

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals/Sys	3		ECE 3210 Electronics II	3	
ECE 3600 Power Engineering	3		ECE 3710 Micro Inter	3	
ECE 3800 Electromagnetics	3		ECE 3720 Micro Inter Lab	1	
Adv. Mathematics Elective ¹	3		ECE 3810 Fields, Waves	3	
	16		ENGL 3140 Tech writing	3	
				17	

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 & 1501 or COMM 2500 & 2501	3		ECE 4960 Systems Design II	2	
ECE 4090 Syst. Des	3		EE Tech Elec OR	3	
ECE 4270 Comm Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Tech Depth Elec	3	
EE Tech Elec	3		Hum/Soc Sci req	3	
	14		Special Elective ²	3	
				14	

NOTES:

1. Advanced Mathematics Elective Options: MATH 4190, MATH 4340, MATH 4350, MATH 4530, or MATH 4540.
2. Special Elective Options:
 - a. 3 additional credits of approved Humanities/Social Science courses; or
 - b. ELE 3010 - Executive Leadership and Entrepreneurship I or ELE 4010 - Executive Leadership and Entrepreneurship II; or
 - c. An additional 3-credit, 400-level course from the EE Technical Elective List or the CpE Technical Elective List; or
 - d. An additional 3-credit MATH course from the following list: MATH 3110 (Linear Algebra), MATH 4120 (Intro. to Modern Algebra), MATH 4190 (Discrete Math I), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus I), MATH 4540 (Advanced Calculus II).

Electrical Engineering
Bachelor of Science Degree
Curricula years 2011-2012, 2012-2013

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1020 Intro Engr	2		CH 1020 & 1021 Gen Chemistry II	4	
CH 1010 & 1011 Gen Chemistry I	4		ENGR 1410 & 1411 Problem solving	3	
ENGL 1030 Comp I	3		MATH 1080 Calc II	4	
MATH 1060 Calc I	4		PHYS 1220 Phys I	3	
Hum/Soc Sci req	3		Hum/Soc Sci req	3	
	16			17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
CPSC 1110 & 1111 C/C++	3		ECE 2120 Circuits Lab II	1	
ECE 2010 Logic	2		ECE 2620 Circuits II	3	
ECE 2020 Circuits I	3		ECE 2720 Comp Org	3	
ECE 2090 Logic Lab	1		ECE 2730 Comp Org Lab	1	
ECE 2110 Circuits Lab I	1		MATH 2080 Diff Eq	4	
MATH 2060 Calc III	4		Hum/Soc Sci req OR EE Tech Elec	3	
PHYS 2210 Physics II	3		[ECE 2220 Sys Progrmng]		
	17			15	

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals/Sys	3		ECE 3210 Electronics II	3	
ECE 3600 Power Engineering	3		ECE 3710 Micro Inter	3	
ECE 3800 Electromagnetics	3		ECE 3720 Micro Inter Lab	1	
Adv. Mathematics Elective ¹	3		ECE 3810 Fields, Waves	3	
	16		ENGL 3140 Tech writing	3	
				17	

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 & 1501 or COMM 2500 & 2501	3		ECE 4960 Systems Des II	2	
ECE 4090 Syst. Des	3		EE Tech Elec OR	3	
ECE 4270 Comm Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Tech Depth Elec	3	
EE Tech Elec	3		Hum/Soc Sci req	3	
	14		Special Elective ²	3	
				14	

NOTES:

1. Advanced Mathematics Elective Options: MATH 4190, MATH 4340, MATH 4350, MATH 4530, MATH 4540.
2. Special Elective Options:
 - a. 3 additional credits of approved Humanities/Social Science courses; or
 - b. ELE 3010 - Executive Leadership and Entrepreneurship I or ELE 4010 - Executive Leadership and Entrepreneurship II; or
 - c. An additional 3-credit, 400-level course from the EE Technical Elective List or the CpE Technical Elective List; or
 - d. An additional 3-credit MATH course from the following list: MATH 3110 (Linear Algebra), MATH 4120 (Intro. to Modern Algebra), MATH 4190 (Discrete Math I), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus I), MATH 4540 (Advanced Calculus II).

Electrical Engineering

Bachelor of Science Degree

Curriculum year 2010-2011

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1020 Intro Engr	2		CH 1020 & 1021 Gen Chemistry II	4	
CH 1010 & 1011 Gen Chemistry I	4		ENGR 1410 & 1411 Problm solvng	3	
ENGL 1030 Comp I	3		MATH 1080 Calc II	4	
MATH 1060 Calc I	4		PHYS 1220 Phys I	3	
Hum/Soc Sci req	3		Hum/Soc Sci req	3	
	16			17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
CPSC 1110 & 1111 C/C++	3		ECE 2120 Circuits Lab II	1	
ECE 2010 Logic	2		ECE 2620 Circuits II	3	
ECE 2020 Circuits I	3		ECE 2720 Comp Org	3	
ECE 2090 Logic Lab	1		ECE 2730 Comp Org Lab	1	
ECE 2110 Circuits Lab I	1		MATH 2080 Diff Eq	4	
MATH 2060 Calc III	4		Hum/Soc Sci req OR EE Tech Elec	3	
PHYS 2210 Physics II	3		[ECE 2220 Sys Progrmng]		
	17			15	

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals/Sys	3		ECE 3210 Electronics II	3	
ECE 3710 Micro Inter	3		ECE 3600 Power Engineering	3	
ECE 3720 Micro Inter Lab	1		ECE 3810 Fields, Waves	3	
ECE 3800 Electromagnetics	3		ENGL 3140 Tech writing	3	
Adv. Mathematics Elective ¹	3				
	17			16	

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 &1501 or COMM 2500 &2501	3		ECE 4960 Systems Des II	2	
ECE 4090 Syst. Des	3		EE Tech Elec OR	3	
ECE 4270 Comm Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Tech Depth Elec	3	
EE Tech Elec	3		Hum/Soc Sci req	3	
	14		Literature requirement	3	
				14	

NOTES:

1. Advanced Mathematics Elective Options: MATH 4190, MATH 4340, MATH 4350, MATH 4530, MATH 4540.
2. No student may enroll in ECE courses until all pre-requisites have been passed with a grade of C or higher.
3. All EE majors must have a cumulative and Engineering GPR of 2.0 to enroll in any 300- or 400-level ECE course.
4. No student may exceed a maximum of two attempts, excluding a W, to successfully complete any ECE course.

Electrical Engineering

Bachelor of Science Degree

Curricula years 2008-2009, 2009-2010

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1020 Intro Engr	2		CH 1020 & 1021 Gen Chemistry II	4	
CH 1010 & 1011 Gen Chemistry I	4		ENGR 1410 & 1411 Problm solvng	3	
ENGL 1030 Comp I	3		MATH 1080 Calc II	4	
MATH 1060 Calc I	4		PHYS 1220 Phys I	3	
Hum/Soc Sci req	3		Hum/Soc Sci req	3	
	16			17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
CPSC 1110 & 1111 C/C++	3		ECE 2120 Circuits Lab II	1	
ECE 2010 Logic	2		ECE 2620 Circuits II	3	
ECE 2020 Circuits I	3		ECE 2720 Comp Org	3	
ECE 2090 Logic Lab	1		ECE 2730 Comp Org Lab	1	
ECE 2110 Circuits Lab I	1		MATH 2080 Diff Eq	4	
MATH 2060 Calc III	4		Hum/Soc Sci req OR EE Tech Elec	3	
PHYS 2210 Physics II	3		[ECE 2220 Sys Progrmng]		
	17			15	

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals/Sys	3		ECE 3210 Electronics II	3	
ECE 3710 Micro Inter	3		ECE 3600 Power Engineering	3	
ECE 3720 Micro Inter Lab	1		ECE 3810 Fields, Waves	3	
ECE 3800 Electromagnetics	3		ENGL 3140 Tech writing	3	
Adv. Mathematics Elective ¹	3				
	17			16	

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 &1501 or COMM 2500 &2501	3		ECE 4960 Systems Des II	2	
ECE 4090 Syst. Des	3		EE Tech Elec OR	3	
ECE 4270 Comm Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Tech Depth Elec	3	
E E Tech Elec	3		Hum/Soc Sci req	3	
	14		Hum/Soc Sci req	3	
				14	

NOTES:

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Electrical Engineering

Bachelor of Science Degree

Curricula years 2005-2006, 2006-2007, 2007-2008

FRESHMAN YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ENGR 1020 Intro Engr	2		CH 1020 & 1021 Gen Chemistry II	4	
CH 1010 & 1011 Gen Chemistry I	4		Hum/Soc Sci req	3	
ENGL 1030 Comp I	3		CPSC 1110 & 1111 C/C++	3	
MATH 1060 Calc I	4		MATH 1080 Calc II	4	
Hum/Soc Sci req	3		PHYS 1220 Phys I	3	
	16			17	

SOPHOMORE YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
Hum/Soc Sci req	3		ECE 2120 Circuits Lab II	1	
ECE 2010 Logic	2		ECE 2620 Circuits II	3	
ECE 2020 Circuits I	3		ECE 2720 Comp Org	3	
ECE 2090 Logic Lab	1		ECE 2730 Comp Org Lab	1	
ECE 2110 Circuits Lab I	1		MATH 2080 Diff Eq	4	
MATH 2060 Calc III	4		CE 2010 Statics	3	
PHYS 2210 Physics II	3			15	
	17				

JUNIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
ECE 3110 Lab III	1		ECE 3120 Lab IV	1	
ECE 3200 Electronics I	3		ECE 3170 Random Signal	3	
ECE 3300 Signals/Sys	3		ECE 3210 Electronics II	3	
ECE 3710 Micro Inter	3		ECE 3600 Power Engineering	3	
ECE 3720 Micro Inter Lab	1		ECE 3810 Fields, Waves	3	
ECE 3800 Electromagnetics	3		ENGL 3140 Tech writing	3	
Adv. Mathematics Elective ¹	3			16	
	17				

SENIOR YEAR

Fall semester	Cr	Term completed	Spring semester	Cr	Term completed
COMM 1500 &1501 or COMM 2500 &2501	3		ECE 4960 Systems Des II	2	
ECE 4090 Syst. Des	3		EE Tech Elec OR	3	
ECE 4270 Comm Systems	3		Hum/Soc Sci req		
ECE 4950 Systems Design I	2		EE Tech Depth Elec	3	
EE Tech Elec	3		Hum/Soc Sci req	3	
	14		Hum/Soc Sci req	3	
				14	

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