Computer Engineering

Bachelor of Science

Curriculum Year 2023-2024

FRESHMAN YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | Spring Semester | | rm oleted |
|----------------|--|----|-------------------|-----------------|--|----|--------------|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 3 | | ENGR 1410/1411 | Programming and Problem Solving ⁴ | 3 | |
| CH 1010/1011 | General Chemistry | 4 | | MATH 1080 | Calculus II | 4 | |
| ENGL 1030/1031 | Composition and Rhetoric | 3 | | PHYS 1220 | Physics with Calculus I | 3 | |
| MATH 1060 | Calculus I ² | 4 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | Arts & Humanities/Social Science Req. ³ | 3 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | | 17 | | | • | 16 | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Complete | Spring Semester | | Cr | Terr Comple | |
|----------------|------------------------------|----|------------------|-----------------|-------------------------------|----|----------------|--|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | ECE 2120 | Electrical Engineering Lab II | 1 | | |
| ECE 2010 | Logic and Computing Devices | 3 | | 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 | | | | | | |
| | | 18 | | | | 15 | | |

JUNIOR YEAR

| Fall Semester | Fall Semester | | Cr Term Completed | | Spring Semester | | Cr | Ter Comp | |
|---------------|---------------------------------|----|----------------------|--|-----------------|-----------------------------------|----|-------------|--|
| 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 | erm pleted | Spring Semester | | Cr | | rm pleted |
|---------------|--|----|---------------|-----------------|--|----|---|--------------|
| ECE 4090 | Intro to Linear Control Systems | 3 | | ECE 4960 | Integrated Systems Design II | 2 | | |
| ECE 4950/4951 | Integrated Systems Design I | 2 | | | Arts & Humanities/Social Science Req. ³ | 3 | | |
| ENGL 3140 | Technical Writing ⁵ | 3 | | | CpE Technical Elective ⁶ | 3 | | |
| | CpE Technical Elective ⁶ | 3 | | | CpE Technical Elective ⁶ | 3 | | |
| | CpE Probability & Statistics Req. ⁷ | 3 | | | Special Requirement ⁹ | 3 | | |
| | Communications Requirement ⁸ | 3 | | | | | · | |
| | | 17 | | | | 14 | | |

Total credit hours = 129

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

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

⁷ ECE 4270, ECE 4300, or ECE 4400.

⁸ COMM 1500/1501 or COMM 2500/2501 or HON 1950 or HON 2230 or AS 3090/3100/4090/4100 or ML 1010/1020.

⁹Three 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 CpE 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 4120 or MATH 4340 or MATH 4350 or MATH 4400 or MATH 4410 or MATH 4530.

Computer Engineering

Bachelor of Science

Curriculum Year 2022-2023

FRESHMAN YEAR

| Fall Semester | | Cr | Term Complete | Spring Semester | Spring Semester | | rm pleted |
|----------------|--|----|------------------|-----------------|--|----|--------------|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 3 | | ENGR 1410/1411 | Programming and Problem Solving ⁴ | 3 | |
| CH 1010/1011 | General Chemistry | 4 | | MATH 1080 | Calculus II | 4 | |
| ENGL 1030/1031 | Composition and Rhetoric | 3 | | PHYS 1220 | Physics with Calculus I | 3 | |
| MATH 1060 | Calculus I ² | 4 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | Arts & Humanities/Social Science Req. ³ | 3 | | | Arts & Humanities/Social Science Req. ³ | 3 | |
| | | 17 | | | | 16 | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Teri Compl | |
|----------------|------------------------------|----|-------------------|-----------------|-------------------------------|----|---------------|--|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | ECE 2120 | Electrical Engineering Lab II | 1 | | |
| ECE 2010 | Logic and Computing Devices | 3 | | 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 | | | | | | |
| | | 18 | | _ | | 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 | erm pleted | Spring Semester | | Cr | Ter Comp | rm oleted |
|---------------|--|----|---------------|-----------------|--|----|-------------|--------------|
| ECE 4090 | Intro to Linear Control Systems | 3 | | ECE 4960 | Integrated Systems Design II | 2 | | |
| ECE 4950/4951 | Integrated Systems Design I | 2 | | | Arts & Humanities/Social Science Req. ³ | 3 | | |
| ENGL 3140 | Technical Writing ⁵ | 3 | | | CpE Technical Elective ⁶ | 3 | | |
| | CpE Technical Elective ⁶ | 3 | | | CpE Technical Elective ⁶ | 3 | | |
| | CpE Probability & Statistics Req. ⁷ | 3 | | | Special Requirement ⁹ | 3 | | |
| | Communications Requirement ⁸ | 3 | | | | | | |
| | | 17 | | | | 14 | | |

Total credit hours = 129

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 Or AS 4090.

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

⁷ ECE 4270, ECE 4300, or ECE 4400.

⁸ COMM 1500/1501 or COMM 2500/2501 or HON 1950 or HON 2230 or AS 3090/3100/4090/4100 or ML 1010/1020.

⁹ 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 CpE Technical Elective, any of the following: (1) A 3-credit approved Humanities/Social Sciences course (see listing in the current Undergraduate Catalog: http://catalog.elemson.edu/); (2) An additional 3-credit, 4000-level course from the EE Technical Elective List or the CpE Technical Elective List; (3) MATH 4120 or MATH 4340 or MATH 4350 or MATH 4400 or MATH 4410 or MATH 4530.

Computer Engineering Bachelor of Science Degree

Curriculum Year 2021-2022 FRESHMAN YEAR

| Fall Semester | | Cr | Ter Comp | Spring Semester | | Cr | rm pleted |
|----------------|---|----|-------------|-----------------|--|----|--------------|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | |
| | Humanities/Social Science Req. ² | 3 | | | Humanities/Social Science Req. ² | 3 | |
| | | 16 | | | | 16 | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | Spring Semester | | rm oleted |
|----------------|------------------------------|----|-------------------|-----------------|-------------------------------|----|--------------|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | ECE 2120 | Electrical Engineering Lab II | 1 | |
| ECE 2010 | Logic and Computing Devices | 3 | | 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 | | | | | |
| | | 18 | | | | 15 | • |

JUNIOR YEAR

| Fall Semester | | Cr | erm pleted | 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 | |

| Fall Semester | | | Term Completed | | Spring Semester | | | 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. ² | 3 | | |
| ENGL 3140 | Technical Writing | 3 | | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Technical Elective ⁴ | 3 | | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | | Special Requirement ⁷ | 3 | | |
| | Communications Requirement ⁶ | 3 | | | | | | | |
| | | 17 | | | | | 14 | | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from approved Technical Elective listing found on ECE website https://www.clemson.edu/cecas/departments/ece/resources/undergrad resources/curriculum.html.

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

⁶ COMM 1500/1501 *or* COMM 2500/2501.

⁷ Special Requirement Options:

Computer Engineering Bachelor of Science Degree

Curriculum Year 2020-2021 FRESHMAN YEAR

| Fall Semester | | Cr | Ter Comp | rm oleted | Spring Semester | | Cr | rm oleted |
|----------------|---|----|-------------|--------------|-----------------|--|----|--------------|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | |
| | Humanities/Social Science Req. ² | 3 | | | | Humanities/Social Science Req. ² | 3 | |
| | | 16 | | | | | 16 | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Comple | | Spring Semester | | Cr | Te: Comp | rm oleted |
|----------------|------------------------------|----|----------------|---|-----------------|-------------------------------|----|-------------|--------------|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | | ECE 2120 | Electrical Engineering Lab II | 1 | | |
| ECE 2010 | Logic and Computing Devices | 3 | | | 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 | | , | | | | · | |
| | | 18 | | | • | | 15 | | |

JUNIOR YEAR

| Fall Semester | | Cr | Ter Comp | Spring Semester | | Cr | Te Comp | |
|---------------|---------------------------------|----|-------------|-----------------|-----------------------------------|----|------------|--|
| 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 | | |

| Fall Semester | | Cr | rm oleted | Spring Semester | | Cr | Ter Comp | |
|---------------|--|----|--------------|-----------------|---|----|-------------|--|
| 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. ² | 3 | | |
| ENGL 3140 | Technical Writing | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Technical Elective ⁴ | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | Special Requirement ⁷ | 3 | | |
| | Communications Requirement ⁶ | 3 | | | | | | |
| | | 17 | | | | 14 | | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from approved Technical Elective listing found on ECE website https://www.clemson.edu/cecas/departments/ece/resources/undergrad resources/curriculum.html.

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

 $^{^6}$ COMM 1500/1501 or COMM 2500/2501.

⁷ Special Requirement Options:

Computer Engineering Bachelor of Science Degree Curriculum Year 2019-2020

FRESHMAN YEAR

| Fall Semester | | Cr | Tei Comp | Spring Semester | | Cr | Te: Comp | |
|----------------|---|----|-------------|-----------------|--|----|-------------|--|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | | |
| | Humanities/Social Science Req. ² | 3 | | | Humanities/Social Science Req. ² | 3 | | |
| | | 16 | | | | 16 | | |

SOPHOMORE YEAR

| Fall Semester | | Cr | rm oleted | Spring Semester | | Cr | Ter | |
|----------------|------------------------------|----|--------------|-----------------|-------------------------------|----|-----|--|
| CPSC 1110/1111 | Intro to Programming in C | 3 | | ECE 2120 | Electrical Engineering Lab II | 1 | | |
| ECE 2010 | Logic and Computing Devices | 3 | | 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 | | | | | | |
| | | 18 | | | | 15 | | |

JUNIOR YEAR

| Fall Semester | | Cr | Term Comple | Spring Semester | | Cr | Ter Comp | |
|---------------|---------------------------------|----|----------------|-----------------|-----------------------------------|----|-------------|---|
| 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 | | • |

| Fall Semester | | Cr | Terr Compl | Spring Semester | | Cr | Term Complet | |
|---------------|--|----|---------------|-----------------|---|----|-----------------|--|
| 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. ² | 3 | | |
| ENGL 3140 | Technical Writing | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Technical Elective ⁴ | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | Special Requirement ⁷ | 3 | | |
| | Communications Requirement ⁶ | 3 | | | | | | |
| | • | 17 | | • | • | 14 | | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from the list on page 2 of this document.

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

 $^{^6\,\}mathrm{COMM}$ 1500/1501 or COMM 2500/2501.

⁷ Special Requirement Options:

Computer Engineering Bachelor of Science Degree Curriculum Year 2018-2019

FRESHMAN YEAR

| Fall Semester | | Cr | Tern Comple | Spring Semester | | Cr | Ter Comp | |
|----------------|---|----|----------------|-----------------|--|----|-------------|--|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | | |
| | Humanities/Social Science Req. ² | 3 | | | Humanities/Social Science Req. ² | 3 | | |
| | | 16 | | | | 16 | | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Ter Comp | Spring Semester | | Cr | Te: Comp | |
|----------------|------------------------------|----|-------------|-----------------|-------------------------------|----|-------------|--|
| 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 | |

| Fall Semester | | Cr | erm pleted | Spring Semester | | Cr | Teri Compl | |
|---------------|--|----|---------------|-----------------|---|----|---------------|--|
| 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. ² | 3 | | |
| ENGL 3140 | Technical Writing | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Technical Elective ⁴ | 3 | | | CpE Technical Elective ⁴ | 3 | | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | Special Requirement ⁷ | 3 | | |
| | Communications Requirement ⁶ | 3 | | | | | | |
| | | 17 | | | | 14 | | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from the list on page 2 of this document.

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

⁶COMM 1500/1501 or COMM 2500/2501.

⁷ Special Requirement Options:

Computer Engineering Bachelor of Science Degree Curriculum Year 2017-2018

FRESHMAN YEAR

| Fall Semester | | Cr | Tei Comp | Spring Semester | | Cr | Te: Comp | |
|----------------|---|----|-------------|-----------------|--|----|-------------|--|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | | |
| | Humanities/Social Science Req. ² | 3 | | | Humanities/Social Science Req. ² | 3 | | |
| | | 16 | | | | 16 | | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Ter Comp | Spring Semester | | Cr | Te: Comp | |
|----------------|------------------------------|----|-------------|-----------------|-------------------------------|----|-------------|--|
| 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 | |

| Fall Semester | | Cr | Te: Comp | rm oleted | 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. ² | 3 | |
| ENGL 3140 | Technical Writing | 3 | | | | CpE Technical Elective ⁴ | 3 | |
| | CpE Technical Elective ⁴ | 3 | | | | CpE Technical Elective ⁴ | 3 | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | | Special Requirement ⁷ | 3 | |
| | Communications Requirement ⁶ | 3 | | | | | | |
| | | 17 | | | | | 14 | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from the list on page 2 of this document.

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

⁶COMM 1500/1501 or COMM 2500/2501.

⁷ Special Requirement Options:

Computer Engineering Bachelor of Science Degree Curriculum Year 2016-2017

FRESHMAN YEAR

| Fall Semester | | Cr | rm oleted | Spring Semester | | Cr | Te: Comp | |
|----------------|---|----|--------------|-----------------|--|----|-------------|---|
| ENGR 1020/1021 | Engineering Disciplines and Skills ¹ | 2 | | ENGR 1410/1411 | Programming and Problem Solving ³ | 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. ² | 3 | | • |
| | Humanities/Social Science Req. ² | 3 | | | Humanities/Social Science Req. ² | 3 | | |
| | | 16 | | | | 16 | | |

SOPHOMORE YEAR

| Fall Semester | | Cr | Term Completed | Spring Semester | | Cr | Te: Comp | |
|----------------|------------------------------|----|-------------------|-----------------|-------------------------------|----|-------------|--|
| 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 | |

| Fall Semester | | Cr | Te: Comp | rm oleted | 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. ² | 3 | |
| ENGL 3140 | Technical Writing | 3 | | | | CpE Technical Elective ⁴ | 3 | |
| | CpE Technical Elective ⁴ | 3 | | | | CpE Technical Elective ⁴ | 3 | |
| | CpE Probability & Statistics Req. ⁵ | 3 | | | | Special Requirement ⁷ | 3 | |
| | Communications Requirement ⁶ | 3 | | | | | | |
| | | 17 | | | | | 14 | |

¹ Or ENGR 1050/1060.

- 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 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).

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 Select from the list on page 2 of this document.

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

⁶COMM 1500/1501 or COMM 2500/2501.

⁷ Special Requirement Options:

Computer 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 | | ENGR 1070 Program & Prob Slvng I | 1 | |
| ENGR 1060 Engr Discipline & Skills II | 1 | | ENGR 1080 Program & Prob Slvng II | 1 | |
| CH 1010 & 1011 General Chemistry | 4 | | ENGR 1090 Program & Prob Slvng III | 1 | |
| ENGL 1030 Accelerated Composition | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1060 Calculus I | 4 | | Hum/Soc Sci req | 3 | |
| Hum/Soc Sci req | 3 | | MATH 1080 Calculus II | 4 | |
| | | | PHYS 1220 Physics with Calculus I | 3 | |
| | 16 | | | 16 | |

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 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 Org 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 Engr | 3 | | ECE 3170 Random Signal Analysis | 3 | |
| ECE 3110 Electrical Engineering Lab III | 1 | | ECE [CPSC] 3220 Introduction to | 3 | |
| ECE 3200 Electronics I | 3 | | Operating Systems | | |
| ECE 3300 Signals, Sys, & Transforms | 3 | | ECE 3270 Digital Computer Design | 3 | |
| ECE 3710 Microcontroller Interfacing | 3 | | ECE 3520 Programming Systems | 3 | |
| ECE 3720 Microcontroller Lab | 1 | | MATH 4190 Discrete Mathematics | 3 | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|------------------------------------|----|----------------|-------------------------------|----|----------------|
| COMM 1500 &1501 or COMM 2500 & | 3 | | ECE 4960 Systems Design II | 2 | |
| 2501 | | | Hum/Soc Sci req | 3 | |
| ECE 4090 Cont &Discrete Sys Design | 3 | | CpE Technical Elective | 3 | |
| ECE 4950 & 4951 Systems Design I | 2 | | CpE Technical Elective | 3 | |
| ENGL 3140 Technical Writing | 3 | | Special Elective ¹ | 3 | |
| CpE Technical Elective | 3 | | | | |
| CpE Technical Elective | 3 | | | | |
| | 17 | | | 14 | |

- 1. 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 4120 (Intro. to Modern Algebra), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus).

Computer 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 | | ENGR 1410 & 1411 Problm solvng | 3 | |
| CH 1010 & 1011 General Chemistry | 4 | | Hum/Soc Sci req | 3 | |
| ENGL 1030 Comp I | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1060 Calc I | 4 | | MATH 1080 Calc II | 4 | |
| Hum/Soc Sci req | 3 | | PHYS 1220 Phys I | 3 | |
| | 16 | | | 16 | |

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 2220 Sys Progrmng | 3 | |
| ECE 2020 Circuits I | 3 | | ECE 2620 Circuits II | 3 | |
| ECE 2090 Logic Lab | 1 | | ECE 2720 Comp Org | 3 | |
| ECE 2110 Circuits Lab I | 1 | | ECE 2730 Comp Org Lab | 1 | |
| MATH 2060 Calc III | 4 | | MATH 2080 Diff Eq | 4 | |
| PHYS 2210 Physics II | 3 | | | | |
| | 17 | | | 15 | |

JUNIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------|----|----------------|------------------------------------|----|----------------|
| ECE 2230 Com Sys Eng | 3 | | ECE 3170 Random Signal | 3 | |
| ECE 3110 Lab III | 1 | | ECE [CPSC] 3220 Intro to Operating | 3 | |
| ECE 3200 Electronics I | 3 | | Structures | | |
| ECE 3300 Signals/Sys | 3 | | ECE 3270 Dig Design | 3 | |
| ECE 3710 Micro Inter | 3 | | ECE 3520 Prog Systems | 3 | |
| ECE 3720 Micro Inter Lab | 1 | | MATH 4190 Discr Math | 3 | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|----------------------------------|----|----------------|-------------------------------|----|----------------|
| COMM 1500 &1501 or COMM 2500 & | 3 | | ECE 4960 Integr Sys Des II | 2 | |
| 2501 | | | Hum/Soc Sci req | 3 | |
| ECE 4090 Systems Design | 3 | | CpE Tech Elec | 3 | |
| ECE 4950 & 4951 Integr Sys Des I | 2 | | CpE Tech Depth Elec | 3 | |
| ENGL 3140 Tech Writing | 3 | | Special Elective ¹ | 3 | |
| CpE Tech Elec | 3 | | | | |
| CpE Tech Elec | 3 | | | | |
| | 17 | | | 14 | |

- 1. 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 4120 (Intro. to Modern Algebra), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus).

Computer 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 | | ENGR 1410 & 1411 Problm solvng | 3 | |
| CH 1010 & 1011 General Chemistry | 4 | | Hum/Soc Sci req | 3 | |
| ENGL 1030 Comp 1 | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1060 Calc I | 4 | | MATH 1080 Calc II | 4 | |
| Hum/Soc Sci req | 3 | | PHYS 1220 Phys I | 3 | |
| | 16 | | | 16 | |

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 2220 Sys Progrmng | 3 | |
| ECE 2020 Circuits I | 3 | | ECE 2620 Circuits II | 3 | |
| ECE 2090 Logic Lab | 1 | | ECE 2720 Comp Org | 3 | |
| ECE 2110 Circuits Lab I | 1 | | ECE 2730 Comp Org Lab | 1 | |
| MATH 2060 Calc III | 4 | | MATH 2080 Diff Eq | 4 | |
| PHYS 2210 Physics II | 3 | | _ | | |
| | 17 | | | 15 | |

JUNIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------|----|----------------|------------------------------------|----|----------------|
| ECE 2230 Com Sys Eng | 3 | | ECE 3170 Random Signal | 3 | |
| ECE 3110 Lab III | 1 | | ECE [CPSC] 3220 Intro to Operating | 3 | |
| ECE 3200 Electronics I | 3 | | Structures | | |
| ECE 3300 Signals/Sys | 3 | | ECE 3270 Dig Design | 3 | |
| ECE 3710 Micro Inter | 3 | | ECE 3520 Prog Systems | 3 | |
| ECE 3720 Micro Inter Lab | 1 | | MATH 4190 Discr Math | 3 | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------------|----|----------------|-------------------------------|----|----------------|
| COMM 1500 &1501 or COMM 2500 & | 3 | | ECE 4960 Integr Sys Des II | 2 | |
| 2501 | | | Hum/Soc Sci req | 3 | |
| ECE 4090 Systems Design | 3 | | CpE Tech Elec | 3 | |
| ECE 4950 Integr Sys Des I | 2 | | CpE Tech Depth Elec | 3 | |
| CpE Tech Elec | 3 | | Special Elective ¹ | 3 | |
| CpE Tech Elec | 3 | | | | |
| ENGL 3140 Tech Writing | 3 | | | | |
| | 17 | | | 14 | |

- 1. 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, 4000-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 4120 (Intro. to Modern Algebra), MATH 4340 (Advanced Engineering Math), MATH 4350 (Complex Variables), MATH 4400 (Linear Programming), MATH 4410 (Intro to Stochastic Models), and MATH 4530 (Advanced Calculus).

Computer 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 | | ENGR 1410 & 1411 Problm solvng | 3 | |
| CH 1010 & 1011 General Chemistry | 4 | | Hum/Soc Sci req | 3 | |
| ENGL 1030 Comp 1 | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1060 Calc I | 4 | | MATH 1080 Calc II | 4 | |
| Hum/Soc Sci req | 3 | | PHYS 1220 Phys I | 3 | |
| | 16 | | | 16 | |

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 2220 Sys Progrmng | 3 | |
| ECE 2020 Circuits I | 3 | | ECE 2620 Circuits II | 3 | |
| ECE 2090 Logic Lab | 1 | | ECE 2720 Comp Org | 3 | |
| ECE 2110 Circuits Lab I | 1 | | ECE 2730 Comp Org Lab | 1 | |
| MATH 2060 Calc III | 4 | | MATH 2080 Diff Eq | 4 | |
| PHYS 2210 Physics II | 3 | | | | |
| | 17 | | | 15 | |

JUNIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------|----|----------------|------------------------------------|----|----------------|
| ECE 2230 Com Sys Eng | 3 | | ECE 3170 Random Signal | 3 | |
| ECE 3110 Lab III | 1 | | ECE [CPSC] 3220 Intro to Operating | 3 | |
| ECE 3200 Electronics I | 3 | | Structures | | |
| ECE 3300 Signals/Sys | 3 | | ECE 3270 Dig Design | 3 | |
| ECE 3710 Micro Inter | 3 | | ECE 3520 Prog Systems | 3 | |
| ECE 3720 Micro Inter Lab | 1 | | MATH 4190 Discr Math | 3 | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------------|----|----------------|-------------------------------|----|----------------|
| COMM 1500 &1501 or COMM 2500 & | 3 | | ECE 4960 Integr Sys Des II | 2 | |
| 2501 | | | Literature requirement | 3 | |
| ECE 4090 Systems Design | 3 | | CpE Tech Elec | 3 | |
| ECE 4950 Integr Sys Des I | 2 | | CpE Tech Depth Elec | 3 | |
| CpE Tech Elec | 3 | | Special Elective ¹ | 3 | |
| CpE Tech Elec | 3 | | | | |
| ENGL 3140 Tech Writing | 3 | | | | |
| | 17 | | | 14 | |

- No student may enroll in ECE courses until all pre-requisites have been passed with a grade of C or higher.
- All CpE majors must have a cumulative and Engineering GPR of 2.0 to enroll in any 300- or 400-level ECE course.
- No student may exceed a maximum of two attempts, excluding a W, to successfully complete any ECE course.

Computer 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 | | ENGR 1410 & 1411 Problm solvng | 3 | |
| CH 1010 & 1011 General Chemistry | 4 | | Hum/Soc Sci req | 3 | |
| ENGL 1030 Comp 1 | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1060 Calc I | 4 | | MATH 1080 Calc II | 4 | |
| Hum/Soc Sci req | 3 | | PHYS 1220 Phys I | 3 | |
| | 16 | | | 16 | |

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 2220 Sys Progrmng | 3 | |
| ECE 2020 Circuits I | 3 | | ECE 2620 Circuits II | 3 | |
| ECE 2090 Logic Lab | 1 | | ECE 2720 Comp Org | 3 | |
| ECE 2110 Circuits Lab I | 1 | | ECE 2730 Comp Org Lab | 1 | |
| MATH 2060 Calc III | 4 | | MATH 2080 Diff Eq | 4 | |
| PHYS 2210 Physics II | 3 | | | | |
| | 17 | | | 15 | |

JUNIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------|----|----------------|------------------------------------|----|----------------|
| ECE 2230 Com Sys Eng | 3 | | ECE 3170 Random Signal | 3 | |
| ECE 3110 Lab III | 1 | | ECE [CPSC] 3220 Intro to Operating | 3 | |
| ECE 3200 Electronics I | 3 | | Structures | | |
| ECE 3300 Signals/Sys | 3 | | ECE 3270 Dig Design | 3 | |
| ECE 3710 Micro Inter | 3 | | ECE 3520 Prog Systems | 3 | |
| ECE 3720 Micro Inter Lab | 1 | | MATH 4190 Discr Math | 3 | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|------------------------------|----|----------------|------------------------|----|----------------|
| COMM 1500 &1501 or COMM 2500 | 3 | | Literature requirement | 3 | |
| &2501 | | | CpE Tech Elec | 3 | |
| CpE Tech Elec | 3 | | CpE Tech Depth Elec | 3 | |
| CpE Tech Elec | 3 | | ECE 4530 Soft Pract | 3 | |
| CpE Tech Elec | 3 | | Hum/Soc Sci req | 3 | |
| ENGL 3140 Tech Writing | 3 | | | | |
| | 15 | | | 15 | |

- No student may enroll in ECE courses until all pre-requisites have been passed with a grade of C or higher.
- All CpE majors must have a cumulative and Engineering GPR of 2.0 to enroll in any 300- or 400-level ECE course.
- No student may exceed a maximum of two attempts, excluding a W, to successfully complete any ECE course.

Computer 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 General Chemistry | 4 | |
| CH 1010 & 1011 General Chemistry | 4 | | CPSC 1110 & 1111 C/C++ | 3 | |
| ENGL 1030 Comp 1 | 3 | | Hum/Soc Sci req | 3 | |
| MATH 1080 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 |
|-------------------------|----|----------------|--------------------------|----|----------------|
| ECE 2220 Sys Progrmng | 3 | | ECE 2230 Com Sys Eng | 3 | |
| ECE 2010 Logic | 2 | | ECE 2120 Circuits Lab II | 1 | |
| ECE 2020 Circuits I | 3 | | ECE 2620 Circuits II | 3 | |
| ECE 2090 Logic Lab | 1 | | ECE 2720 Comp Org | 3 | |
| ECE 2110 Circuits Lab I | 1 | | ECE 2730 Comp Org Lab | 1 | |
| MATH 2060 Calc III | 4 | | MATH 2080 Diff Eq | 4 | |
| PHYS 2210 Physics II | 3 | | | | |
| | 17 | | | 15 | |

JUNIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--|----|----------------|------------------------|----|----------------|
| ECE 3110 Lab III | 1 | | ECE 3170 Random Signal | 3 | |
| ECE 3200 Electronics I | 3 | | ECE 3270 Dig Design | 3 | |
| ECE 3220 Intro to Operating Structures | 3 | | ECE 3520 Prog Systems | 3 | |
| ECE 3300 Signals/Sys | 3 | | ENGL 3140 Tech Writing | 3 | |
| ECE 3710 Micro Inter | 3 | | MATH 4190 Discr Math | 3 | |
| ECE 3720 Micro Inter Lab | 1 | | | | |
| MATH 3110 Linear Algebra | 3 | | | | |
| | 17 | | | 15 | |

SENIOR YEAR

| Fall semester | Cr | Term completed | Spring semester | Cr | Term completed |
|--------------------------------|----|----------------|---------------------|----|----------------|
| Hum/Soc Sci req | 3 | | ECE 4530 Soft Pract | 3 | |
| CpE Tech Elec | 3 | | Hum/Soc Sci req | 3 | |
| CpE Tech Elec | 3 | | Hum/Soc Sci req | 3 | |
| CpE Tech Elec | 3 | | CpE Tech Elec | 3 | |
| COMM 1500 &1501 or COMM 2500 & | 3 | | CpE Tech Depth Elec | 3 | |
| 2501 | | | | | |
| | 15 | | | 15 | |

- No student may enroll in ECE courses until all pre-requisites have been passed with a grade of C or higher.
- All CpE majors must have a cumulative and Engineering GPR of 2.0 to enroll in any 300- or 400-level ECE course.
- No student may exceed a maximum of two attempts, excluding a W, to successfully complete any ECE course.