

Appendix A: Sample Programs of Study for the ECE Major and Select Second Majors, Minors, and Special Programs

Table A.1a
Electrical and Computer Engineering (ECE) Major (matric 2018 – 2020)

First Year	
Fall Semester	Spring Semester
EGR 101L Engineering Design & Communication	ECE 110L Fundamentals of ECE
Math 111L Introductory Calculus I	Math 112L Introductory Calculus II
EGR 103L Computational Methods in Engineering ¹	Physics 151L Introductory Mechanics ³
Writing 101 / Chem 101DL Core Concepts in Chemistry ²	Chem 101DL Core Concepts in Chemistry / Writing 101
Sophomore Year	
Fall Semester	Spring Semester
ECE 280L Signals and Systems	ECE 230L / ECE 250D / ECE 270DL
COMPSCI 201 Data Structures and Algorithms	ECE 230L / ECE 250D / ECE 270DL
Math 212 Multivariable Calculus	Math 216 Linear Algebra & Differential Equations
Physics 152L Intro Electricity, Magnetism, Optics ³	Social Science or Humanities Elective 2
Social Science or Humanities Elective 1	
Junior Year	
Fall Semester	Spring Semester
ECE 230L / ECE 250D / ECE 270DL	ECE Elective ⁵
ECE Concentration Elective 1 ⁴	ECE Concentration Elective 2
Math 353 Ordinary & Partial Differential Equations	Statistics Elective ⁶
Social Science or Humanities Elective 3	Social Science or Humanities Elective 4
Senior Year	
Fall Semester	Spring Semester
ECE Extension Elective ⁷ or ECE Design Elective ⁸	ECE Design Elective or ECE Extension Elective
ECE Concentration Elective 3	ECE Concentration Elective 4
Social Science or Humanities Elective 5	Free Elective
Free Elective	Free Elective
Free Elective	

1. Students who place into CompSci 201 are not required to take EGR 103L.
2. AP credit for Chem 20 or 21 is also acceptable.
3. See also the [Physics requirements](#).
4. ECE Concentration Electives: Four courses selected from the set approved for the ECE program. Courses must be selected from at least two areas, and at least two courses must be from the same area. See [Appendix D: Approved ECE Concentration Elective Areas and Courses](#) for a complete course listing.
5. ECE Elective: Any ECE course at the 300 level or above.
6. Statistics Elective selected from the list of approved Statistics electives, found in [Appendix E](#).
7. ECE Extension Elective: Any upper-level (300-level or above) Natural Science or Engineering course, or one selected from a list of approved 200-level Natural Science courses (check with DUS for approved list). **AP credits cannot be used to satisfy this requirement.** See [ECE Extension Elective](#) for complete description and constraints.
8. Approved ECE Design Elective: Approved Electrical & Computer Engineering Design Elective taken after meeting all Math, Science, and ECE Core curriculum requirements. In addition, each approved design elective has one or more pre-requisite upper-level ECE courses. The elected design course may not simultaneously also count as an ECE Concentration Elective, ECE Extension Elective, or ECE Elective. See [Appendix E](#) for a list of all currently approved Design courses.