

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

**Table A.1
Electrical and Computer Engineering (ECE) Major**

First Year	
Fall Semester	Spring Semester
EGR 103L (53L) Computational Methods in Engineering	ECE 110L (27L) Fundamentals of ECE
Math 111L (31L) Introductory Calculus I	Math 112L (32L) Introductory Calculus II
Chem 101DL (31L) Core Concepts in Chemistry ¹	Physics 151L (61L) Introductory Mechanics ²
Writing 101(20) / Social Science or Humanities Elective 1	Social Science or Humanities Elective 1 / Writing 101(20)
Sophomore Year	
Fall Semester	Spring Semester
ECE 280L (54L) Signals and Systems	ECE 230L (51L) Microelectronic Devices and Circuits
COMPSCI 201 (100) Data Structures and Algorithms	ECE 250L Computer Architecture
Math 212 (103) Multivariable Calculus	Math 216 (107) Linear Algebra & Differential Equations
Physics 152L (62L) Intro Electricity, Magnetism, Optics ²	Biology Elective ³
Social Science or Humanities Elective 2	Social Science or Humanities Elective 3
Junior Year	
Fall Semester	Spring Semester
ECE 270L (53L) Electromagnetic Fields	ECE Elective 1 ⁵
ECE Concentration Elective 1 ⁴	ECE Concentration Elective 2
Math 353 (108) Ordinary & Partial Differential Equations	Statistics Elective ⁶
Social Science or Humanities Elective 4	Social Science or Humanities Elective 5
Senior Year	
Fall Semester	Spring Semester
ECE Elective 2 or Approved ECE Design Elective ⁷	Approved ECE Design Elective or ECE Elective 2
ECE Concentration Elective 3	ECE Concentration Elective 4
Free Elective	Free Elective
Free Elective	Free Elective

1. AP credit for Chem 20(18) or 21(19) is also acceptable.
2. See also the Physics requirements on [p.5](#).
3. Biology Elective selected from the list of approved Biology electives, found in [Appendix D](#).
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 C](#) for a complete course listing.
5. ECE Elective: Any ECE course at the 300(100) level or above.
6. Statistics Elective selected from the list of approved Statistics electives, found in [Appendix D](#).
7. 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 or ECE Elective. See [Appendix D](#) for a list of all currently approved Design courses.