

**Table A.4a**  
**ECE with Physics Second Major (matric ≤ 2017)**  
 (with one Math AP credit)

<b>First Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
EGR 103L Computational Methods in Engineering	ECE 110L Fundamentals of ECE
Math 122L Calculus II	Math 212 Multivariable Calculus
Chem 101DL Core Concepts in Chemistry <sup>1</sup>	Physics 151L Introductory Mechanics
Writing 101 / Social Science or Humanities Elective 1	Social Science or Humanities Elective 1 / Writing 101
<b>Sophomore Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 280L Signals and Systems	ECE 230L / ECE 250D / ECE 270DL
COMPSCI 201 Data Structures and Algorithms	ECE 230L / ECE 250D / ECE 270DL
Math 216 Linear Algebra & Differential Equations	Math 353 Ordinary & Partial Differential Equations
Physics 152L Intro Electricity, Magnetism, Optic	Physics 361 Intermediate Mechanics <sup>2</sup>
Social Science or Humanities Elective 2	Social Science or Humanities Elective 3
<b>Junior Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 230L / ECE 250D / ECE 270DL	ECE Elective <sup>4</sup>
ECE Concentration Elective 1 <sup>3</sup>	ECE Concentration Elective 2
Physics 264L Optics and Modern Physics	Statistics Elective <sup>5</sup>
Physics 362 Electricity & Magnetism	Physics Elective (200-level or above)
Social Science or Humanities Elective 4	
<b>Senior Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
Approved ECE Design Elective <sup>6</sup> / Social Science or Humanities Elective 5	Social Science or Humanities Elective 5 / Approved ECE Design Elective
ECE Concentration Elective 3	ECE Concentration Elective 4
Physics 464 Quantum Mechanics I	Physics Elective (300-level or above)
Physics 417S Advanced Physics Lab & Seminar	Physics 363 Thermal Physics

1. AP credit for Chem 20 or 21 is also acceptable.
2. Physics 361 satisfies the Natural Science/Engineering requirement.
3. 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.
4. ECE Elective: Any ECE course at the 300 level or above. Note that ECE 311, which is required for the Physics major, counts as a second ECE elective.
5. Statistics Elective selected from the list of approved Statistics electives, found in [Appendix E](#).
6. 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 E](#) for a list of all currently approved Design courses.