

**Table A.3b**  
**ECE/BME Double Major (matriculating classes ≥ 2011)**

<b>Freshman Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
EGR 103L (53L) Computational Methods in Engineering	Biology 201L (101L) Molecular Biology <i>[alt; Chem 210DL (32L) or Chem 201DL (151L)]</i>
Math 111L (31L) Introductory Calculus I	Math 112L (32L) Introductory Calculus II
Chem 101DL (31L) Core Concepts in Chemistry <sup>1</sup>	Physics 151L (61L) Introductory Mechanics <sup>2</sup>
Writing 101(20) / Social Science or Humanities Elective 1	Social Science or Humanities Elective 1 / Writing 101(20)
<b>Sophomore Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 110L (27L) Fundamentals of ECE	ECE 230L (51L) Microelectronic Devices and Circuits
EGR 201L (75L) Mechanics of Solids	ECE 280L (54L) Signals and Systems
Math 212 (103) Multivariable Calculus	Math 216 (107) Linear Algebra & Differential Equations
Physics 152L (62L) Intro Electricity, Magnetism, Optics <sup>2</sup>	COMPSCI 201 (100) Data Structures and Algorithms
BME 244L (144L) Quantitative Physiology <i>[alt: Bio 201L(Bio 101L)]</i>	Chem 210DL (32L) Apps Chem Principles <b>or</b> Chem 201DL (151L) Organic Chemistry <i>[alt: BME 244L (BME 144L)]</i>
<b>Junior Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 270L (53L) Electromagnetic Fields	ECE Concentration Elective 1 <sup>3</sup>
ECE 250L Computer Architecture	BME 354L (154L) Biomed Electronics and Measurement II
Math 353 (108) Ordinary & Partial Differential Equations	BME 301L (201L) Bioelectricity <b>or</b> BME 303 (233) Modern Diagnostic Imaging Systems <sup>5</sup>
ME 221L (83L) Structure and Properties of Solids	Stat 130 (113) Probability and Statistics
BME 260L (100L) Modeling Cell & Molecular Systems	Social Science or Humanities Elective 2
<b>Senior Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE Elective <sup>4</sup> or ECE Concentration Elective 2	ECE Elective or ECE Concentration Elective 2
BME design: BME 436L (236L) <b>or</b> 464L (264L)	BME General Elective
BME Area Elective <sup>5</sup>	Social Science or Humanities Elective 4
Life Science Elective <sup>6</sup>	Social Science or Humanities Elective 5
Social Science or Humanities Elective 3	

- Students are required to have Chem 21 (19) or take Chem 101DL (31L) or Chem 110DL (43L).
- See also the Physics requirements on [p.5](#).
- 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.
- ECE Elective: Any ECE course at the 300 (100) level or above.
- If BME 301L (201L) is taken, the Area Elective must be from the Bioelectricity Area  
If BME 303 (233) is taken, the Area Elective must be from the Imaging and Sensors Area  
See the BME Undergraduate Program Handbook for details.
- See the BME Undergraduate Program Handbook for a list of approved Life Science Electives.