

**Table A.3a**  
**ECE with BME Second Major (matric 2018 – 2020)**

<b>First Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
EGR 101L Engineering Design & Communication	Biology 201L Molecular Biology <i>[alt; Chem 210DL or Chem 201DL]</i>
Math 111L Introductory Calculus I	Math 112L Introductory Calculus II
Chem 101DL Core Concepts in Chemistry <sup>1</sup>	Physics 151L Introductory Mechanics <sup>2</sup>
Writing 101 / EGR 103L Computational Methods in Engineering <sup>7</sup>	Writing 101 / EGR 103L Computational Methods in Engineering <sup>7</sup>
<b>Sophomore Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 110L Fundamentals of ECE	ECE 230L / ECE 270DL / ECE 280L
EGR 201L Mechanics of Solids	ECE 230L / ECE 270DL / ECE 280L
Math 212 Multivariable Calculus	Math 216 Linear Algebra & Differential Equations
Physics 152L Intro Electricity, Magnetism, Optics <sup>2</sup>	COMPSCI 201 Data Structures and Algorithms
BME 244L Quantitative Physiology <i>[alt: Bio 201L]</i>	Chem 210DL Apps Chem Principles <b>or</b> Chem 201DL Organic Chemistry <i>[alt: BME 244L]</i>
<b>Junior Year</b>	
<b>Fall Semester</b>	<b>Spring Semester</b>
ECE 250D Computer Architecture	ECE Concentration Elective 1 <sup>3</sup>
ECE 230L / ECE 270DL / ECE 280L	BME 354L Biomed Electronics and Measurement II
Math 353 Ordinary & Partial Differential Equations	BME 301L Bioelectricity <b>or</b> BME 303 Modern Diagnostic Imaging Systems <sup>5</sup>
ME 221L Structure and Properties of Solids	Statistics Elective <sup>6</sup>
BME 260L Modeling Cell & Molecular Systems	Social Science or Humanities Elective 1
<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 <b>or</b> 464L or 474L	BME General Elective
BME Advanced Elective <sup>5</sup>	Social Science or Humanities Elective 4
Social Science or Humanities Elective 2	Social Science or Humanities Elective 5
Social Science or Humanities Elective 3	

1. Students are required to have Chem 21 or take Chem 101DL or Chem 110DL.
2. See also the [Physics requirements](#).
3. ECE Concentration Electives: Two courses selected from the set approved for the ECE program. Both courses must be selected 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.
5. If BME 301L is taken, the Advanced Elective must be in the Electrobiolology (EL) Area of Focus.  
If BME 303 is taken, the Advanced Elective must be in the Imaging and Measurements (IM) Area of Focus.  
See the BME Undergraduate Program Handbook for details.
6. Statistics Elective selected from the list of approved Statistics electives, found in [Appendix E](#).
1. Students who place into CompSci 201 are not required to take EGR 103L.