

**Table A.2a**  
**ECE with Computer Science (COMPSCI) Second Major (matric 2018 – 2020)**

| <b>First Year</b>   |   |
|---|---|
| <b>Fall Semester</b>  | <b>Spring Semester</b>                                |
| 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 <sup>1</sup>                      | Physics 151L Introductory Mechanics <sup>3</sup>      |
| Writing 101 / Chem 101DL Core Concepts in Chemistry <sup>2</sup>                | Chem 101DL Core Concepts in Chemistry / Writing 101   |
| <b>Sophomore Year</b>   |   |
| <b>Fall Semester</b>  | <b>Spring Semester</b>                                |
| ECE 280L Signals and Systems  | ECE 230L / ECE 270DL                                  |
| COMPSCI 201 Data Structures and Algorithms                                      | ECE 250D Computer Architecture                        |
| Math 212 Multivariable Calculus   | Math 216 Linear Algebra & Differential Equations      |
| Physics 152L Intro Electricity, Magnetism, Optics <sup>3</sup>                  | Social Science or Humanities Elective 2               |
| Social Science or Humanities Elective 1   |   |
| <b>Junior Year</b>  |   |
| <b>Fall Semester</b>  | <b>Spring Semester</b>                                |
| ECE 230L / ECE 270DL  | ECE 350L Digital Systems                              |
| COMPSCI 310 Operating Systems   | COMPSCI 307D or 308 (Adv.) Soft Design & Implement    |
| Math 353 Ordinary & Partial Differential Equations                              | Statistics Elective <sup>4</sup>                      |
| Social Science or Humanities Elective 3   | Social Science or Humanities Elective 4               |
| <b>Senior Year</b>  |   |
| <b>Fall Semester</b>  | <b>Spring Semester</b>                                |
| ECE Elective <sup>6</sup> or ECE Digital Systems Elective <sup>7</sup>          | ECE Elective or ECE Digital Systems Elective          |
| ECE Extension Elective <sup>8</sup> or ECE/COMPSCI Design Elective <sup>9</sup> | ECE Extension Elective or ECE/COMPSCI Design Elective |
| COMPSCI 330 Design & Analysis of Algorithms                                     | COMPSCI Elective <sup>10</sup>                        |
| ECE Concentration Elective <sup>5</sup>   | Free Elective   |
| Social Science or Humanities Elective 5   |   |

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. Statistics Elective selected from the list of approved Statistics electives, found in [Appendix E](#).
5. ECE Concentration Elective: One course selected from the set of approved ECE Concentration Electives *from outside the Computer Engineering and Digital Systems area*. See [Appendix D: Approved ECE Concentration Elective Areas and Courses](#). For the ECE with COMPSCI second major, the four-course ECE Concentration requirement is satisfied by taking this one non-Digital Systems ECE Concentration elective in addition to three other courses built into the ECE with COMPSCI second major curriculum: ECE 350L, COMPSCI 310, and an ECE Digital Systems Elective.
6. ECE Elective: Any ECE course at the 300 level or above.
7. ECE Digital Systems Elective: One course from the Digital Systems area in the list of Approved ECE Concentration Area electives (see [Appendix D: Approved ECE Concentration Elective Areas and Courses](#)).
8. 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.
9. Approved ECE/COMPSCI Design Elective: Approved ECE/COMPSCI 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.
10. COMPSCI Elective: Any COMPSCI elective at the 200 level or above.