

Table A.2c
ECE with Concentration in ML and COMPSCI Second Major (matric 2018 – 2020)

First Year	
Fall Semester	Spring Semester
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 ¹	Physics 151L Introductory Mechanics ³
Writing 101 / Chem 101DL Core Concepts in Chemistry ²	Chem 101DL Core Concepts in Chemistry / Writing 101
Sophomore Year	
Fall Semester	Spring Semester
ECE 280L Signals and Systems	ECE 250D Computer Architecture
Math 212 Multivariable Calculus	Math 216 Linear Algebra & Differential Equations
COMPSCI 201 Data Structures and Algorithms	Statistics Elective ⁴
Physics 152L Intro Electricity, Magnetism, Optics ³	Social Science or Humanities Elective 2
Social Science or Humanities Elective 1	
Junior Year	
Fall Semester	Spring Semester
ECE 230L / ECE 270DL	ECE 230L / ECE 270DL
ECE 480 Applied Prob. for Statistical Learning (ECE Concentration Elective/ML1)	ECE 580 Introduction to Machine Learning (ECE Elective/ML2)
COMPSCI 310 Operating Systems	COMPSCI 307D or 308 (Adv.) Soft Design & Implement
Math 353 Ordinary & Partial Differential Equations	ECE 350L Digital Systems
Social Science or Humanities Elective 3	
Senior Year	
Fall Semester	Spring Semester
ECE Digital Systems Elective (ML3) ⁵	COMPSCI Elective (ML5) ⁸
ECE Extension Elective (ML4) ⁶ or ECE/COMPSCI Design Elective ⁷	ECE Extension Elective (ML4) or ECE/COMPSCI Design Elective
COMPSCI 330 Design & Analysis of Algorithms	Free Elective
Social Science or Humanities Elective 4	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 Digital Systems Elective: From list of approved Digital Systems Concentration courses, with ML focus (e.g., ECE 661).
6. ECE Extension Elective: One of ECE 588, 661, 682D, 685D, 687D, or ECE 590 with ML focus (w/ approval)
7. 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.
8. COMPSCI Elective: One of CS 371, CS 527, CS 571, or CS 671D.