2024 - 2025 <u>ECE</u> M.S. / Ph.D. Degree Planner: Computer Engineering (EC79)

- Minimum of 12 units (Plan I) or 16 units (Plan II) must be 201+ ECE courses that must count towards your degree.
- All courses counted towards the degree must be taken for a letter grade and for 4 units, with the exception of research units.
 Students CANNOT repeat a course unless they earned a D, F, or U grade. If you'd like to repeat a course, please submit the
- online form. More information about how to repeat a course can be found here.
- Must meet the Academic Residency requirement. More detailed info can be found here.
- List of pre-approved course substitutions can be found here.

Core Course (4 Units)

ECE 260B	VLSI Integrated Circuits & Systems Design	
4		

*Students may take CSE 241A in place of ECE 260B. May only receive credit for one of these courses towards the degree. 20 Additional Units Selected from the following

ECE 226	Optimization and Acceleration of Deep Learning on Various Hardware Platforms	
ECE 228	Machine Learning for Physical Applications	
ECE 250	Random Processes	
ECE 251A	Digital Signal Processing I	
ECE 252A	Speech Compression	
ECE 253	Fundamentals of Digital Image Processing	
ECE 254	Detection Theory	
ECE 257A-B	Modern Communication Networks, Principles of Wireless Networks	
ECE 258A-B	Digital Communication	
ECE 260A, C	VLSI Digital System Algorithms & Architectures, VLSI Advanced Topics	
ECE 265A	Communication Circuit Design I	
ECE 267	Wireless Embedded & Networked Systems	
ECE 268	Security of Hardware Embedded Systems	
ECE 277	GPU Programming	
ECE 284	Special Topic in CE: Low-power VLSI Implementation for Machine Learning	
ECE 284	Special Topic in CE: Mobile Health Design	
ECE 284	Special Topic in CE: Parallel Computing in Bioinformatics	
CSE 202	Algorithm Design & Analysis	
CSE 221	Operating Systems	
CSE 222B	Internet Algorithmics	
CSE 224	Graduate Networked System	
CSE 237A	Intro to Embedded Computing	
CSE 240A	Principles of Computer Architecture	
CSE 243A	Intro to Synthesis Methodologies in VLSI CAD	
CSE 245	Computer Aided Circuit Simulation & Verification	

Quarter (List FA##, WI##, SP## below)	Core Courses
Total: 4 Units	

Quarter (List FA##, WI##, SP## below)	Additional Units
Total: 20 Units	

Quarter (List FA##, WI##, SP## below)	Technical Electives	
Total: 24 Units		

Technical Electives (24 Units)

- Any 4 unit, 200+ course from ECE, CSE, MAE, BENG, CENG, NANO, SE, MATS, MATH, or PHYS taken for a letter grade may be counted.* Exceptions to this list require departmental approval.
- Up to 12 units of undergraduate ECE/CSE coursework (ECE 111+ only** and CSE 100+ only***)
 - M.S. students (Plan II) are allowed no more than 4 units of research as technical electives. Ph.D. and M.S. students (Plan I) are allowed no more than 8 units of research as technical electives. The following research course(s) could be used toward the degree:
 - ECE 299, CSE 293/298/299, MAE 299, BENG 299, NANO 299, SE 299, DSC 299
- * Seminar courses cannot count towards the degree
- ** Not including ECE courses numbered: 195, 197, 198, 199, 210 or 298
- *** Not including CSE courses numbered: 123, 140, 140L, 143 or 294

Curriculum Advisor

٠

EC79 Advisor Contact Information

Role: Advises graduate students regarding course selection; Considers any exception requests requiring faculty approval; Sign forms; Technical engineering related questions & job advice. PLEASE CONTACT <u>YOUR STAFF ADVISOR</u> FOR ALL OTHER ISSUES.