UC San Diego
Electrical and Computer Engineering

2025 - 2026 ECE 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 (12 Units)

ECE 260B	VLSI Integrated Circuits & Systems Design
ECE 260C	VLSI Advanced Topics
ECE 284	Advanced Computer Architecture

Quarter (List FA##, WI##, SP## below)	Core Courses
Total: 12 Units	

16 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 213	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 243A	Intro to Synthesis Methodologies in VLSI CAD
CSE 245	Computer Aided Circuit Simulation & Verification

Quarter (List FA##, WI##, SP## below)	Additional Units
Total: 16 Units	

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

Technical Electives (20 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

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 YOUR STAFF ADVISOR FOR ALL OTHER ISSUES.**