

# 2025 - 2026 <u>ECE</u> M.S. / Ph.D. Degree Planner: Electronic Circuits & Systems (EC78)

- 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.

## Core Coursework (12 Units) – choose one sequence from the following options:

The following combined options are from the 264A-D series (CMOS Analog Integrated Circuits & Systems I, II, III, IV) and the ECE 265A-D series (Communication Circuit Design I & II, Power Amplifiers for Wireless Communications, Communication Circuit Design III). Students must take A-B but the 3rd class is flexible.

ECE 264A-B, choose the 3rd course from ECE 264C, 264D, 265A, 265B, 265C, 265D, 260A or 260B

ECE 265A-B, choose the 3rd course from ECE 265C, 265D, 264A, 264B, 264C, 264D, 260A or 260B

- 'B-' grade or higher needs to be earned in order to move onto the next part of the sequence. No exceptions.
- ❖ 'B-' grade or higher needs to be earned in ECE 264A and ECE 250 in order to move onto ECE 264B. No exceptions.

## 16 Additional Units Selected from the following

ECE 203	Biomedical Integrated Circuits and Systems
ECE 222A-B-C-D	Antennas & Their System Applications, Applied Electromagnetic Theory-Electromagnetics, Computational Methods for Electromagnetics, Advanced Antenna Design
ECE 250	Random Processes
ECE 251A-B-C-D	Digital Signal Processing I & II, Filter Banks & Wavelets, Array Processing
ECE 260A-B-C	VLSI Digital System Algorithms & Architectures, Integrated Circuits & Systems Design, Advanced Topics
ECE 264A-B-C-D	CMOS Analog Integrated Circuits & Systems I, II, III, IV
ECE 265A-B-C-D	Communication Circuit Design I & II, Power Amplifiers for Wireless Communications, Communication Circuits III
ECE 266A-B	CMOS Circuit Lab I & II (formerly ECE 283: Integrated Circuit Lab)
ECE 283 (Fall)	Power Management Integrated Circuits
ECE 283 (Winter)	High-Speed Wireline Communication Circuits and Systems

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

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)**

- At least 12 units from any 4-unit, 200+ course from ECE taken for a letter grade.
- Up to 8 units from any 4-unit, 200+ course from CSE, DSC, MAE, BENG, CENG, NANO, SE, MATS, MATH, PHYS, or CogSci taken for a letter grade may be counted. \*Exceptions to this list require departmental approval.
- Up to 8 units of undergraduate ECE coursework (ECE 111+ only\*\*) OR up to one 4-unit course of undergraduate ECE coursework (ECE 111+ only\*\*) and one 4-unit course of CSE undergraduate coursework (CSE 100+ only\*\*\*) may be counted.
- M.S. students (Plan II) are allowed no more than 4 units of research units 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**

Role: Advises graduate students regarding course selection; Considers any exception requests requiring faculty approval; Signs forms; Technical engineering related questions & job advice.

PLEASE CONTACT **YOUR STAFF ADVISOR** FOR ALL OTHER ISSUES.