

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

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

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 266 | CMOS Circuit Lab | |
| 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 |
|---|-----------------|
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| | |
| | |
| Total: 12 Units | |

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

| Quarter (List FA##, WI##, SP## below) | Technical Electives | |
|---|------------------------|--|
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| 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

EC78 Advisor Contact Information

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.

B-' grade or higher needs to be earned in order to move onto the next part of the sequence. No exceptions.