

# 2025 - 2026 <u>ECE</u> M.S. / Ph.D. Degree Planner: Applied Electromagnetics (EC92)

- 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 <u>online form</u>. More information about how to repeat a course can be found <u>here</u>.
- Must meet the Academic Residency requirement. More detailed info can be found <u>here</u>.

### **Core Courses (12 Units)**

ECE 222A-B-C-D	Antennas & Their System Applications, Theory-Electromagnetics, Computational Methods, Advanced Antenna Design	

## 12 Additional Units Selected from the following

ECE 212AN-BN-CN	Principles of Nanoscience & Nanotechnology, Nanoelectronics, Nanophotonics	
ECE 221	Magnetic Materials: Principles and Applications	
ECE 222A-B-C-D*	Antennas & Their System Applications, Applied Electromagnetic Theory-Electromagnetics, Computational Methods for Electromagnetics, Advanced Antenna Design	
ECE 230A-B-C	Solid State Electronics I, II ,III	
ECE 236A-B-C	III-V Compound Semiconductor Materials, Optical Processes in Semiconductors, Heterojunction Field-Effect Transistors	
ECE 240A-B-C	Lasers & Optics, Optical Information Processing, Optical Modulation & Detection	
ECE 258A-B	Digital Communications I, II	
ECE 251A-B-C	Digital Signal Processing I, II, Filter Banks and Wavelets	
ECE 264A-B-C	CMOS Analog Integrated Circuits & Systems I, II, III	
ECE 265A-B-C	Communication Circuit Design I, II, Power Amplifiers for Wireless Communications	

* A course not counted in core coursework may be counted ne	re.
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# **Technical Electives (24 Units)**

- Any 4 unit, 200+ course from ECE, CSE, MAE, BENG, CENG, NANO, SE, MATS, MATH, PHYS or COGS taken for a letter grade may be counted.\* Exceptions to this list require departmental approval.
- ♦ Up to 12 units of undergraduate ECE coursework (ECE 111+ only\*\*) OR up to two 4-unit courses 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 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**

**EC92 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.



## Total: 12 Units

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