

# **2024 - 2025 ECE M.S. / Ph.D. Degree Planner: Photonics (EC81)**

- \* 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 Courses (12 Units)

ECE 240A	Lasers and Optics	
ECE 240B	Optical Information Processing	
ECE 240C	Optical Modulation and Detection	

## 12 Additional Units Selected from the following

ECE 212CN	Nanophotonics	
ECE 222B-C	Applied Electromagnetic Theory – Electromagnetics & Computational Methods for Electromagnetics	
ECE 236B	Optical Processes in Semiconductors	
ECE 241A-B-C	Nonlinear Optics, Integrated Photonics, Holographic Optical Elements	
ECE 243B	Optical Fiber Communication	
ECE 244A	Statistical Optics	
ECE 247A*	Advanced BioPhotonics	

<sup>\*</sup>Students may take BENG 247A/NANO 247A in place of ECE 247A. May only receive credit for one of these courses towards their degree.

### **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 ECE Department 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.

**Technical** 

Quarter

- 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) ٠ 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, MATS 299, BENG 299, NANO 299, SE 299

### **Curriculum Advisor**

**EC81 Advisor Contact Information** 

Curriculum Advisor Role: Advises graduate students regarding course selection; considers any exception requests requiring faculty approval; signs forms; provides technical engineering related questions and job advice. PLEASE CONTACT YOUR STAFF ADVISOR FOR ALL OTHER ISSUES.

Quarter (List FA##, WI##, SP## below)	Core Courses
	ECE 240A
	ECE 240B
	ECE 240C
Total: 12 Units	·

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

Electives		
Total: 24 Units		

<sup>\*</sup>Seminar courses cannot count towards your degree

<sup>\*\*</sup> Not including ECE 195, 197, 198, 199, 210 or 298

<sup>\*\*\*</sup> Not including CSE 123, 140, 140L or 143