

# 2025 - 2026 <u>ECE M.S. / Ph.D. Degree Planner:</u> Intelligent Systems, Robotics & Control (EC80)

- 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 (16 Units)**

ECE 269	Linear Algebra & Application
ECE 271A	Statistical Learning I
ECE 272A*	Dynamic Systems I: Linear Systems
ECE 276A	Sensing & Estimation in Robotics

<sup>\*</sup>Students may take MAE 280A in place of ECE 272A. May only receive credits for one of these courses towards the degree.

### 12 Additional Units Selected from the following

ECE 250	Random Processes
ECE 252A-B	Speech Compression, Speech Recognition
ECE 253	Fundamentals of Digital Image Processing
ECE 271B-C	Statistical Learning II, Deep Learning & Applications
ECE 272B	Dynamic Systems II: Stochastic Systems
ECE 273	Convex Optimization & Applications
ECE 275A-B	Parameter Estimation I & II
ECE 276B-C	Planning & Learning in Robotics, Robot Manipulation and Control
ECE 285*	Special Topics in Signal & Image Processing/Robotics & Control Systems
CSE 250A	Principles of Artificial Intelligence: Probabilistic Reasoning & Learning
CSE 252A	Computer Vision I
MAE 247	Cooperative Control of Multi-Agent Systems
MAE 280A**	Linear Systems Theory
MAE 281A	Nonlinear Systems

Quarter (List FA##, WI##, SP## below)	Core Courses
	ECE 269
	ECE 271A
	ECE 276A
Total: 16 Units	

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

**EC80 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.

<sup>\*</sup>Multiple ECE 285 courses may be used to satisfy this requirement, as long as each topic is different.

<sup>\*\*</sup>Students can't count MAE 280A towards their additional units or technical electives if they have taken ECE 272A.