UC San Diego JACOBS SCHOOL OF ENGINEERING Department of Electrical and Computer Engineering

2024 - 2025 <u>ECE</u> M.S. / Ph.D. Degree Planner: 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*	Stochastic Processes in Dynamic Systems I	
ECE 276A	Sensing & Estimation in Robotics	

Quarter/Core Courses		
	ECE 269	
	ECE 271A	
	ECE 276A	
Total: 16 Units		

*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	Stochastic Processes in Dynamic Systems II	
ECE 273	Convex Optimization & Applications	
CE 275A-B	Parameter Estimation I & II	
ECE 276B-C	Planning & Learning in Robotics, Robot Reinforcement Learning	
CE 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	
/IAE 280A**	Linear Systems Theory	
MAE 281A	Nonlinear Systems	



Quarter/Tech. Electives		
Total: 20 Units		

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

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

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 298/299, MAE 299, BENG 299, NANO 299, SE 299, DSC 299
- * Seminar courses cannot count towards the degree
- ** Not including ECE 195, 197, 198, 199, 210 or 298
- *** Not including CSE 123, 140, 140L, or 143

Curriculum Advisor

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EC80 Advisor: Yang Zheng Email: yaz058@ucsd.edu Phone: 858-534-5687 Role: Advises graduate students regarding course selection; Considers any exception requests requiring faculty approval; Signs forms; Technical engineering related questions & job advice. PLEASE CONTACT <u>YOUR STAFF ADVISOR</u> FOR ALL OTHER ISSUES.