

# 2023 - 2024 <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*	Stochastic Processes in Dynamic Systems I
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.

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

## 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	
ECE 275A-B	Parameter Estimation I & II	
ECE 276B-C	Planning & Learning in Robotics, Robot Reinforcement Learning	
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	
*AA.Jain-FCC 205		

Quarter/Add. Courses		

Quarter/Tech. 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 any Jacobs School of Engineering 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.
  - ECE 299, CSE 298/299, MAE 299, BENG 299, NANO 299, SE 299

### **Curriculum Advisor**

EC80 Advisor (Fall) : Nuno Vasconcelos Email: nvasconcelos@ucsd.edu

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EC80 Advisor (Winter & Spring): Yang Zheng

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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.

<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.

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