

## 2024 - 2025 ECE M.S. / Ph.D. Degree Planner: Applied Ocean Sciences (EC75)

- 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: SIO 202A-B and 8 units (16 Units)

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SIO 202A-B	Fundamentals of Wave Physics	
SIO 210	Physical Oceanography	
SIO 240	Marine Geology	
SIO 260	Marine Chemistry	
SIO 280	Biological Oceanography	

# Quarter (List FA##, WI##, SP## below) SIO 202A SIO 202B Total: 16 Units

#### 12 Additional Units Selected from the following

Antennas and Their System Applications, Applied Electromagnetic Theory—Electromagnetics	
Probability & Statistics for Data Science	
Machine Learning for Physical Applications	
Lasers & Optics	
Random Processes	
Digital Signal Processing I & II, Filter Banks & Wavelets, Array Processing	
Fundamentals of Digital Image Processing	
Linear Algebra & Applications	
Statistical Learning I & II	
Convex Optimization & Applications	
Parameter Estimation I & II	

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

Quarter

Quarter (List FA##, WI##, SP## below)	Technical Electives	
Total: 20 Units		

### **Technical Electives (20 Units)**

- Any 4 unit, 200+ course from ECE, CSE, DSC, SIO, MAE, BENG, CENG, NANO, SE, MATS, MATH, or PHYS taken for a letter grade may be counted.\* Exceptions to this list require departmental approval.
- The following courses are recommended, not required: ECE 278; SIO 203 A-B/MAE 294 A-B/ECE 278 and remaining courses from SIO 210, 240, 260, 280.
- ♦ Up to 12 units of undergraduate ECE coursework (ECE 111+ only\*\*) OR up to two 4-unit courses of undergraduate ECE coursework (ECE111+ 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**

**EC75 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.