

M.S. / Ph.D. Degree Planner: Applied Ocean Sciences (EC75) 2020-2021

- ❖ 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.

Core Coursework: SIO214 & 202A-B and 8 units (20 Units):

SIO 214A	Introduction to Fluid Mechanics
SIO 202A-B	Fundamentals of Wave Physics
SIO 210	Physical Oceanography
SIO 240	Marine Geology
SIO 260	Marine Chemistry
SIO 280	Biological Oceanography

Quarter/Core Course	
	SIO 214A
	SIO 202A
	SIO 202B
Total: 20 Units	

12 Additional Units Selected from the following:

ECE 222A-B-C-D	Antennas & Applications, Applied Electromagnetic Theory: Electromagnetics, Computational Methods, Advanced Antenna Design
ECE 250	Random Processes
ECE 251A-B-C-D	Digital Signal Processing I & II, Filter Banks & Wavelets, Array Processing
ECE 253	Fundamentals of Digital Image Processing
ECE 254	Detection Theory
ECE 271A-B	Statistical Learning I & II
ECE 273	Convex optimization & Applications
ECE 275A-B	Parameter Estimation I & II

Quarter/Add. Units	
Total: 12 Units	

Technical Electives (16 units):

- ❖ With the exception of research units, all courses counted towards the degree must be taken for a letter grade
- ❖ Additional courses will generally consist of graduate ECE, SIO, CSE, MAE, MATH, or PHYS courses and MUST be approved by curriculum advisor
- ❖ The following courses are recommended, not required: SIO 203 A-B/MAE 294 A-B, SIO 215 A-B 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 course of undergraduate ECE coursework (ECE 111+ only*) and one 4-unit course of CSE undergraduate coursework (CSE100+ only**) may be counted.
- ❖ MS students (Plan II) are allowed no more than 4 units of any Jacobs School of Engineering Research units as technical electives. PhD and MS 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

*Not including ECE 195, 197, 198, 199 or 298

** Not including CSE 123A, 140, 140L, or 143

Quarter/Tech.Electives	
Total: 16 Units	

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Curriculum/Faculty Advisor: Advises M.S. students regarding course selection; Considers any exception requests requiring faculty approval (such as course substitutions); Sign forms; Technical engineering related questions & job advice- **PLEASE CONTACT YOUR STAFF ADVISOR FOR ALL OTHER ISSUES.**