

M.S. / Ph.D. Degree Planner: Medical Devices & Systems (EC90) 2020-2021

- ❖ Minimum of 12 units (Plan I) or 14 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.
- ❖ Students **CANNOT** repeat a course unless they earned a D, F, U, or W 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](#).
- ❖ Note that **ONLY** 100+ courses will count towards your overall GPA.

Core Coursework (12 Units Including ECE 201) - Choose 2 Courses:

ECE 201	Intro to Biophysics
ECE 187*	Intro to Biomedical Imaging & Sensing
ECE 202	Medical Devices & Interfaces
ECE 203	Biomedical Integrated Circuits & Systems
ECE 204	Statistical Learning in Bioinformatics
ECE 247 A-B-C	Advanced BioPhotonics, BioElectronics, BioNanotechnology

Quarter/Core Courses	
	ECE 201
Total: 12 Units	

* Students can take BENG280A OR ECE 187, not both. Only one of these courses could count towards the degree.

12 Additional Units Selected from the following:

- ❖ Two CORE graduate courses from the same major area of ECE. Please mark which major area is chosen so that it is reflected on the audit. (AEM, AOS, AP-EDM, CTS, CE, ECS, ISRC, MI, MLDS, NDS, PHO, or SIP)
- ❖ One graduate or senior-level course in Biology, Biochemistry, or Medicine

Some examples of courses that satisfy this requirement are: BENG 230A, BENG 230B, BENG 231, NANO 242, BGGN 235, BGGN 211, BGGN 223, BGGN 224, BGGN 242, and BGGN 249B-C. This is by no means a comprehensive list of courses and many more courses in biology, biochemistry, and medicine are offered by UCSD to meet the requirement. PhD students should discuss with their faculty advisor and M.S. students with their curriculum advisor to choose course(s) in biomedicine relevant to their graduate study.

Quarter/Add. Units	
Total: 12 Units	

Technical Electives (24 Units)

- ❖ Any 4 unit, 200+ course from ECE, CSE, MAE, BENG, CENG, NANO, SE, MATS, MATH, or PHYS 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.
- ❖ MS students (Plan II) are allowed no more than 4 units of ECE 299 (research units) as technical electives. PhD and MS students (Plan I) are allowed no more than 8 units of ECE 299 as technical electives.
- ❖ All courses counted towards the degree must be taken for a letter grade.
- ❖ Students are strongly encouraged to take as least 2 seminar courses about translational research and FDA regulatory procedures and requirements from ECE, Center for Medical Device and Instrumentation, School of Medicine, or other departments. (Will NOT be counted toward required 48 units).

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

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

Quarter/Tech. Electives	
Total: 24 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.**