

## M.S. / Ph.D. Degree Planner: Applied Physics - Electronic Devices & Materials (EC76)

### COURSE REQUIREMENTS

#### Core Coursework (twelve units)

ECE 230 A-B-C                      Solid State Electronics

Core Courses	
	ECE 230A
	ECE 230B
	ECE 230C
<b>Total: 12 Units</b>	

#### Any two of the following twelve unit sequences (twenty-four units)

ECE 212 AN-BN-CN	Principles of Nanoscience and Nanotechnology, Nanoelectronics, Nanophotonics
ECE 222 A-B-C	Antennas and Their System Applications, Applied Electromagnetic Theory - Electromagnetics and Computational Methods for Electromagnetics
ECE 236 A-B-C	III-V Compound Semiconductor Materials, Optical Processes in Semiconductors, Heterojunction Field Effect Transistors, Heterojunction Bipolar Transistors
ECE 238 A-B, MS 201C	Thermodynamics of Solids, Solid State Diffusion and Reaction Kinetics, Phase Transformations
ECE 240 A-B-C	Lasers and Optics, Optical Information Processing, Optical Modulation and Detection
ECE 251 A-B-C-D <sup>2</sup>	Digital Signal Processing I and II, Filter Banks and Wavelets, Array Processing
ECE 260 A-B-C	VLSI- Digital System Algorithms and Architectures, Integrated Circuits and Systems Design, Advanced Topics
MATH 210 A-B-C	Mathematical Methods in Physics and Engineering
PHYS 211 A, PHYS 212 A-B	Solid State Physics, Quantum Mechanics

Additional Courses	
<b>Total: 24 Units</b>	

<sup>1</sup> Students cannot receive credit for both ECE 212A & 212AN, 212B & 212BN or 212C & 212CN.

<sup>2</sup> Students may choose any three of the four courses listed for ECE 251.

#### Technical Electives (twelve 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) may be counted
- M.S. Students (Plan II) are allowed no more than 4 units of 299 as technical electives. Ph.D. and M.S. Students (Plan I) are allowed no more than 8 units of 299 as technical electives.

Technical Electives	
<b>Total: 12 Units</b>	

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Advisor's Signature

Date

Student Name

PID