Department of Electrical and Computer Engineering
Upper Division Specialization

As part of your graduation requirements, you must choose an upper division specialization consisting of three lecture courses and one laboratory, all from the same specialization. You are free to choose any specialization you wish, and you do not need approval to change specializations. However, you will not graduate unless you meet the requirements of at least one area of specialization. Therefore, even though you do not need approval to change it, it would be wise to discuss this further with an advisor if you have any questions.

Communications	**Controls**
You must take EE 4200 and choose two courses from the list below. In addition, select one of the two labs listed.	You must take all the courses listed below:
EE 4210 Coding for Communications	EE 4600 Applied Control System Design & Simulation
EE 4220 Digital Signal Processing	EE 4610 Digital Control Systems
EE 4230 Antennas	EE 4620 Modern Control Systems
EE 4240 Fiber Optics	EE 4689 Control Systems Lab
EE 4400 Data Communications & Networking	
EE 4630 Machine Learning Principles and Applications	
select either:	
EE 3209 Communications Lab	
or	
EE 4229 Digital Signal Processing Lab	
Computers	**Biomedical**
You must take EE 4440 and choose two other courses from the list below.	You must take EE 4810 and EE 4820, and choose one more course from the list below.
EE 4400 Data Communications & Networking	EE 4200 Digital Communication Systems
EE 4450 Embedded Architectures	EE 4220 Digital Signal Processing
EE 4480 Advanced Dig Design	EE 4600 Applied Control System Design & Simulation
EE 4630 Machine Learning Principles and Applications	EE 4630 Machine Learning Principles and Applications
	EE 4710 Analog Integrated Circuits
Power	**Electronics**
You must take EE 4300, EE 4310, and EE 3309 (lab). In addition, select one course from the list below:	You must take EE 3710, EE 3720, and EE 3709 (lab). In addition, select one course from the list below:
EE 4320 Electric Power Distribution	EE 4330 Power Electronics
EE 4330 Power Electronics	EE 4710 Analog Integrated Circuits