

List of graduate expanded core courses in different areas of emphasis

Electromagnetics		
Prefix/Number	Title	Credits
EE 515	Electromagnetic Theory I	3
EE 516	Electromagnetic Theory II	3
EE 521	Microwave Engineering	3
EE 541	Antennas and Radiation	4
EE 548	Introduction to Radar	3
EE 549	Smart Antennas	3
EE 615	Computational Electromagnetics	3
Microelectronics/VLSI		
Prefix/Number	Title	Credits
EE 510	Introduction to Analog and Digital VLSI	3
EE 512	ASIC Design	3
EE 520	A/D and D/A Converter Design	3
EE 523	Analog VLSI Design	3
EE 567	ARM SOC Design	3
EE 590	Selected Topics (Hardware for Machine Learning)	3
Photonics		
Prefix/Number	Title	Credits
EE 528	Fundamentals of Photonics	4
EE 529	Lasers and Applications	4
EE 577	Fourier Methods in Electro-Optics	3
EE 578	Optical System Design	3
Electric Energy Systems		
Prefix/Number	Title	Credits
EE 534	Power System Relaying	3
EE 537	Power Electronics	3
EE 540	Photovoltaic Devices and Systems	3
EE 542	Power Systems II	3
EE 543	Power Systems III	3
EE 544	Distribution Systems	3
EE 590	Selected Topics (Power System Modeling and Numerical Computational Methods)	3

Digital Signal Processing		
Prefix/Number	Title	Credits
EE 545	Digital Signal Processing II	3
EE 565	Machine Learning I ¹	3
EE 575	Machine Learning II	3
EE 576	Geometric Algebra ¹	3
EE 585	Telemetry Systems ¹	3
EE 588	Advanced Image Processing	3
EE 596	Digital Image Processing ¹	3
EE 597	Neural Signal Processing	3
EE 675	Machine Learning III	3
Computer Engineering		
Prefix/Number	Title	Credits
EE 558	Hardware Security and Trust	3
EE 562	Computer Systems Architecture	3
EE 563	Computer Performance Analysis I	3
EE 564	Architectural Concepts II	3
EE 590	Selected Topics (Introduction to Quantum Computing)	3
EE 590	Selected Topics (Applications of Parallel Computing)	3
EE 593	Mobile Application Development	3
Communications		
Prefix/Number	Title	Credits
EE 571	Random Signal Analysis	3
EE 572	Modern Coding Theory	3
EE 573	Signal Compression	3
EE 581	Digital Communication Systems I	3
EE 583	Wireless Communications	3
EE 585	Telemetry Systems ¹	3
EE 586	Information Theory	3
Control & Robotics		
Prefix/Number	Title	Credits
EE 551	Control System Synthesis I	3
EE 565	Machine Learning I ¹	3
EE 576	Geometric Algebra ¹	3
EE 596	Digital Image Processing ¹	3

¹ This course is included in multiple areas of emphasis. Students may use this course to satisfy one area of emphasis.