

ECE EDGE OFFERINGS

	Fall 05	Spring 06	Summer 06	Fall 06	Spring 07	Summer 07	Fall 07	Spring 08	Summer 08	Fall 08	Spring 09	Summer 09	Fall 09	Spring 10
1st Cohort:	5320	6321	5701											
	5544	6535	5718											
				6507	6509									
				6502	6503									
2nd Cohort:	5320	6321	5701											
	5544	6535	5718											
						6591	6509							
						5322	6825							
3rd Cohort:	5320	6321	5701											
	5544	6535	5718											
								6591	6509					
								5322	6374					
Pipeline:	6486	6487												
	6562	6825												
4th cohort:	6562	6825	5701											
	5544	6535	5718											
										6591	6509			
										5322	6374			

	5320 Bipolar Analog IC Design	Fox	Amplifier stages, active loads, output stages, op-amps, feedback, frequency response, compensation.
	6321 MOS Analog IC Design	Fox	Design of analog circuits in CMOS IC technology. MOS switches, MOS op amp circuits, circuit simulation using SPICE
	5544 Noise in Lin Systems	Wong, Shea	Passage of electrical noise and signals through linear systems. Statistical representation of random signals, electrical noise, and spectra.
	6535 Digital Comm	Yang, Shea	Digital modulation techniques, analysis of digital comm. systems in presence of noise; optimum principles, synchronization; equalization
	5701 DSP	Taylor, Yang	Analysis and design of digital filters for discrete signal processing; spectral analysis; fast Fourier transform.
	6502 Adaptive Sig Proc	Principe	Theory of adaptation with stationary signals; performance measures. LMS, RLS algorithms. Implementation issues and applications
	5718 Computer Comm	Latchman, McNair	Design of data communication networks; modems, terminals. Error control, multiplexing, message switching, and data concentration.
	6507 Queueing Theory & Data Comm.	Boykin	Introduction to basic queueing models; performance analysis of multiple access protocols; error control strategies.
	6591 Wireless Networks	McNair	Physical layer, cellular concepts, multiple access control protocols. FEC and ARQ protocols, resource allocation and wireless standards
	6486 Fields 1	Zmuda	Advanced electrostatics, magnetostatics, time-varying electromagnetic fields, wave propagation, waveguides
	6487 Fields 2	Zmuda	Electromagnetic radiation antennas, wave propagation in anisotropic media
	6562 Image Proc/Computer Vision	Wu	Pictorial data representation, feature encoding; spatial filtering; image enhancement; image segmentation; object recognition; ...
	6825 Pattern Rec & Intell Systems	Slatton	Optimum decision criteria; training algorithms; unsupervised learning; feature extraction; data reduction; syntactic pattern description; ...
	5322 VLSI Circuits & Technology	Eisenstadt	Intro. To VLSI circuit technology and manufacturing. Fabrication, device models, layout, parasitics, and simple gate circuits
	6374 RF Circuits & Technology	Lin	Requirements for RF ICs. Interdependence of RF circuit performance with devices, parasitics, packages and process technology
	6503 Spread Spectrum	Yang	Techniques and applications; spreading sequence design; code division multiple access; multi-user detection
	6509 Wireless Comm.	Wu	Satellite, cellular systems, propagation, multiple access techniques, channel coding, speech/video coding; wireless computer networks.

Notes:

Each cohort provides a five-semester curriculum leading to an online MS degree.

Colors indicate breadth sequences.

Two breadth sequences are required.