

School of Electrical and Computer Engineering Projected Schedule of Graduate Courses

The following table lists the ECE undergraduate courses currently projected to be offered at the Atlanta campus and through the video/internet distance education program. Classes taught at GT-Lorraine, GT-Savannah, GT-Shanghai, or as part of study abroad programs are not listed.

The projected schedule of classes is normally updated in March each year. The projected schedule for the coming year (2011-12) is fairly certain; changes will be reflected in the registration schedule for each term. The projected schedule for 2012-13 is preliminary and is likely to be modified in spring 2012.

Additionally, summer schedules are subject to changes in student enrollment, budgets, and/or faculty availability. Based on previous years' schedules, 5 - 8 graduate courses likely will be offered.

X = course scheduled to be offered

? = course may be offered in this term, based on prior years' schedules

ST = special topic course (offered as ECE 88xx)

video = course offered via video/internet in addition to on-campus section

altvid = course normally offered via video/internet in alternate years; not offered via video/internet this year

NOTE: Cross-listed courses (for satisfying MS and PhD domain requirements) are listed under multiple Technical Interest Areas.

Bioengineering	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6200 - Biomedical Applications of MEMS	3-0-3			X			
ECE 6780 - Medical Image Processing (cross-listed in Digital Signal Processing)	3-0-3			altvid			video
ECE 6786 - Medical Imaging Systems (cross-listed in Digital Signal Processing)	3-0-3						X
ECE 6787 - Quantitative Electrophysiology	3-0-3			X			X
Computer Systems and Software (previously part of Computer Engineering)							
(previously part of Computer Engineering)	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6100 - Advanced Computer Architecture	3-0-3		video	X		video	X
ECE 6101 - Parallel & Distributed Computer Arch	3-0-3			video			video
ECE 6102 - Dependable Distributed Systems	3-0-3					X	
ECE 6110 - CAD for Computer Communication Netw	2-3-3		X			X	
ECE 6277 - DSP Software Systems Design (cross-listed in Digital Signal Processing)	2-3-3					X	
ECE 7102 - RISC Architectures	3-0-3						
Design and Analysis of Multiprocessor Interconnection Networks	3-0-3			ST		X	
Embedded Video Surveillance Systems	2-3-3			ST			
Adv Programming Techniques for Engineering Appl	2-3-3		ST, video				

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Digital Signal Processing	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6250 - Advanced Digital Signal Processing	3-0-3		video			altvid	
ECE 6254 - Statistical Digital Signal Proc & Modeling	3-0-3			altvid			video
ECE 6255 - Digital Processing of Speech Signals	3-0-3			video			altvid
ECE 6258 - Digital Image Processing	3-0-3		video			video	
ECE 6260 - Data Compression and Modeling	3-0-3			X			
ECE 6271 - Adaptive Filtering	3-0-3	video					
ECE 6272 - Fund of Radar Signal Processing	3-0-3					video	
ECE 6273 - Methods Pattern Recog w/ Appl to Voice	3-0-3		video			altvid	
ECE 6276 - DSP Hardware Systems Design (cross-listed in Computer Engineering)	2-3-3		video				
ECE 6277 - DSP Software Systems Design (cross-listed in Computer Engineering)	2-3-3					video	
ECE 6279 - Spatial Array Processing	3-0-3						video
ECE 6280 - Cryptography and Security	3-0-3			X			
ECE 6282 - Radar Imaging	3-0-3						video
ECE 6780 - Medical Image Processing (cross-listed in Bioengineering)	3-0-3			X			X
ECE 6786 - Medical Imaging Systems (cross-listed in Bioengineering)	3-0-3						X
ECE 7251 - Signal Detection and Estimation	3-0-3			X			
ECE 7252 - Advanced Signal Processing Theory	3-0-3					X	
Nonlinear Filtering	3-0-3			ST			
Electrical Energy							
Electrical Energy	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6320 - Power Systems Control and Operation	3-0-3		video			video	
ECE 6321 - Power System Stability	3-0-3						video
ECE 6322 - Power System Planning and Reliability	3-0-3	video					
ECE 6323 - Power System Protection	2-2-3			video			
ECE 6330 - Power Electronic Devices & Subsystems	3-0-3						
ECE 6331 - Power Electronic Circuits	3-0-3		video			video	
ECE 6332 - Power Electronics CAD Laboratory	0-3-1						
ECE 6335 - Electric Machinery Analysis	3-0-3					video	
ECE 6336 - Dynamics & Ctrl Electric Machine Drives	3-0-3			X			X
ECE 6340 - Electric Power Quality	2-2-3	ECE 6340 has been converted to ECE 4325.					
Computational Intelligence in Electric Power	3-0-3		ST				
Power Systems Economics	3-0-3						
Renewable Generation in Power Systems	3-0-3			ST, vid			

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Electromagnetics	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6350 - Applied Electromagnetics	3-0-3		X			X	
ECE 6360 - Microwave Design	3-0-3			X			X
ECE 6361 - Microwave Design Laboratory	2-3-3				X		
ECE 6370 - Electromagnetic Radiation and Antennas	3-0-3			X			X
ECE 6380 - Intro to Computational Electromagnetics	3-0-3					video	
ECE 6390 - Satellite Comm and Navigation Systems (cross-listed in Telecommunications)	3-0-3		video			altvid	
ECE 7370 - Antennas & Wave Propagation in Matter	3-0-3						
ECE 7380 - Topics in Computational Electromagnetics	3-0-3			X			
Electronic Design & Applications	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6412 - Analog Integrated Circuit Design	3-0-3			X			X
ECE 6414 - Analog Integrated System Design	3-0-3			X			X
ECE 6416 - Low Noise Electronic System Design	2-3-3					X	
ECE 6420 - Wireless IC Design	3-0-3					X	
ECE 6422 - Interface IC Design for MEMS and Sensors	3-0-3		X				X
ECE 6430 - Digital MOS Integrated Circuits	3-0-3				X		
ECE 6435 - Neuromorphic Analog VLSI Circuits	3-0-3			X		X	
ECE 6440 - Frequency Synthesizers	3-0-3						
ECE 6442 - Electronic Oscillators	3-0-3						
ECE 6444 - Silicon-Based Heterostructure Devices and Ckts (cross-listed in Microsystems)	3-0-3						
Oscillators and PLLs	3-0-3		ST				
Microsystems	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6444 - Silicon-Based Heterostructure Devices and Ckts (cross-listed in EDA)	3-0-3						
ECE 6450 - Intro to Microelectronics Technology	3-0-3		video			altvid	
ECE 6451 - Intro to the Theory of Microelectronics	3-0-3		altvid			video	
ECE 6453 - Theory of Electronic Devices	3-0-3			video			altvid
ECE 6455 - Semiconductor Process Control	3-0-3						X
ECE 6456 - Solar Cells	3-0-3		X			X	
ECE 6458 - Gigascale Integration	3-0-3	X					
ECE 6460 - Microelectromechanical Devices	3-0-3			X			X
ECE 6542 - Optoelectronics: Dev, Integr, Pkg, Sys (cross-listed in Optics and Photonics)	3-0-3			X		X	
ECE 6759 - Plasma Processing of Electronic Materials & Devices	3-0-3						
ECE 6771 - Optoelectronics: Matls, Processes, Dev (cross-listed in Optics and Photonics)	3-0-3						X
ECE 6776 - Microelectronic Systems Packaging Technologies	3-0-3		X			X	
ECE 6779 - Thermal Engineering for Packaging of Micro and Nano Systems	3-0-3		X			X	
Carbon and Molecular Nanoelectronics	3-0-3			ST			
Wide Bandgap Semiconductors: Matls and Devices	3-0-3			ST			

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Optics and Photonics	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6500 - Fourier Techniques and Signal Analysis	3-0-3	altvid				video	
ECE 6501 - Fourier Optics and Holography	3-0-3		X				
ECE 6510 - Electro-Optics	3-0-3	video			video		
ECE 6520 - Integrated Optics	3-0-3					video	
ECE 6521 - Optical Fibers	3-0-3					video	
ECE 6522 - Nonlinear Optics	3-0-3			video			
ECE 6530 - Modulation, Diffractive & Crystal Optics	3-0-3		video			altvid	
ECE 6540 - Organic Optoelectronics	3-0-3			X			X
ECE 6542 - Optoelectronics: Dev, Integr, Pkg, Sys (cross-listed in Microsystems)	3-0-3			video		altvid	
ECE 6543 - Fiber Optic Networks	3-0-3						X
ECE 6771 - Optoelectronics: Matls, Processes, Dev (cross-listed in Microsystems)	3-0-3						X
Systems and Controls							
Systems and Controls	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6550 - Linear Systems and Controls	3-0-3		video			video	
ECE 6551 - Digital Control	3-0-3	video					
ECE 6552 - Nonlinear Systems and Control	3-0-3						video
ECE 6553 - Optimal Control and Optimization	3-0-3			video			video
ECE 6554 - Adaptive Control	3-0-3			video			altvid
ECE 6555 - Optimal Estimation	3-0-3			video			
ECE 6556 - Intelligent Control	3-0-3					X	
ECE 6557 - Manufacturing Systems Design	3-0-3						
ECE 6558 - Stochastic Systems	3-0-3			video			
ECE 6559 - Advanced Linear Systems	3-0-3						
ECE 6560 - PDEs in Image Proc and Comp Vision	3-0-3			altvid			video
ECE 6561 - Computing for Control Systems	3-0-3		X				
Network-Controlled Systems	3-0-3		ST				
Autonomous Control of Robotic Systems	3-0-3		ST				
Telecommunications							
Telecommunications	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6390 - Satellite Comm and Navigation Systems (cross-listed in Electromagnetics)	3-0-3		X			X	
ECE 6601 - Random Processes	3-0-3		altvid			video	
ECE 6602 - Digital Communications	3-0-3			altvid			video
ECE 6603 - Advanced Digital Communications	3-0-3	video					
ECE 6604 - Personal and Mobile Communications	3-0-3		video			altvid	
ECE 6605 - Information Theory	3-0-3		altvid			video	
ECE 6606 - Coding Theory and Applications	3-0-3			altvid			video
ECE 6607 - Computer Communication Networks	3-0-3		video			video	
ECE 6608 - Performance Analysis of Comm Netw	3-0-3						
ECE 6610 - Wireless Networks	3-0-3		altvid			video	
ECE 6611 - Broadband Networking	3-0-3						
ECE 6612 - Computer Network Security	3-0-3			video			video
ECE 6613 - Broadband Access Networks	3-0-3		altvid				
ECE 6614 - Multimedia Communications: Signal Proc, Networking, Applications, and Stds	3-0-3			X			
ECE 6615 - Sensor Networks	3-0-3			altvid			video
ECE 7611 - Advanced Communication Theory	3-0-3						
Cognitive Radio Networks	3-0-3			ST, vid			
Fundamentals of Broadband Communication	3-0-3						

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VLSI Systems and Digital Design (previously part of Computer Engineering)	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6130 - Advanced VLSI Systems	3-0-3		X				X
ECE 6132 - Computer-Aided System Design	3-0-3					X	
ECE 6133 - Physical Design Automation VLSI Sys	3-0-3		X				X
ECE 6140 - Digital Systems Test	3-0-3		altivd			video	
ECE 6276 - DSP Hardware Systems Design (cross-listed in Digital Signal Processing)	2-3-3		X				
ECE 7131 - Asynchronous & Self Timed Systems	3-0-3						
ECE 7141 - Advanced Digital Systems Test	2-3-3			X			
ECE 7142 - Fault Tolerant Computing	3-0-3				video		
CAD for DFM	3-0-3			ST			
Courses not in ECE MS/PhD domains	Credits	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013
ECE 6730 - Modeling & Simulation: Foundations and Implementation	3-0-3						X
ECE 6792 - Manufacturing Seminar	1-0-1		X	X		X	X
ECE 7785 - Intro Robotics Research	3-0-3		X			X	
ECE 8001 - ECE Seminar	1-0-1		X			X	
ECE 8002 - ECE Seminar	1-0-1			X			X
ECE 8003 - ECE Seminar	1-0-1						
ECE 8010 - Research Seminar	1-0-1		X	X		X	X
ECE 8020 - Professional Communication Skills	2-3-3						
ECE 8022 - Professional Communication Seminar	1-0-1		X	X		X	X
ECE 8750 - Robotics Research Foundation I	0-9-3		X	X		X	X
ECE 8751 - Robotics Research Foundation II	0-9-3		X	X		X	X
CETL 8722 - Academic Writing for Intl Grad Stud	1-0-1						
CETL 8793 - Oral Skills for Intl Grad Stud	2-0-2						